Food Packer

Canning Glasspacking Freezing

February 1953

Man-of-the-month: Louis Ratzesberger Jr.

NCA's new president rose to the top through hard work, ability, and what he calls "Luck." Page 102.

We all know Chicago, site of the 1953 Canners Show!

Pre-convention features:

"Lou" Ratzesberger's company celebrates 75 years of progress. The story of The Illinois Canning Co. Page 28.

• • •

Recipe Foods at Terre Haute, Indiana.

New products, hard hitting merchandising, and high quality have helped make a leader of this company. Page 30.

California freezing plant use ingenious methods.

Smooth plant operations at Patterson Frozen Foods turn out quality products. Page 36.

A Vance Publication

The National Magazine of Production and Management

Which cap helps sell the product?

● A colorful cap helps sell the product in *two* ways. In dealers' displays, it gets attention for your package and stimulates more impulse purchases.

In the home, too, an attractive cap repeats your brand name or sales message each time the package is used . . . builds repeat purchases.

The increasing trend toward self-service shopping puts new demands on your package. It now has a real selling job to do. Surveys prove this, showing that 67% of all purchases are decided in the store!

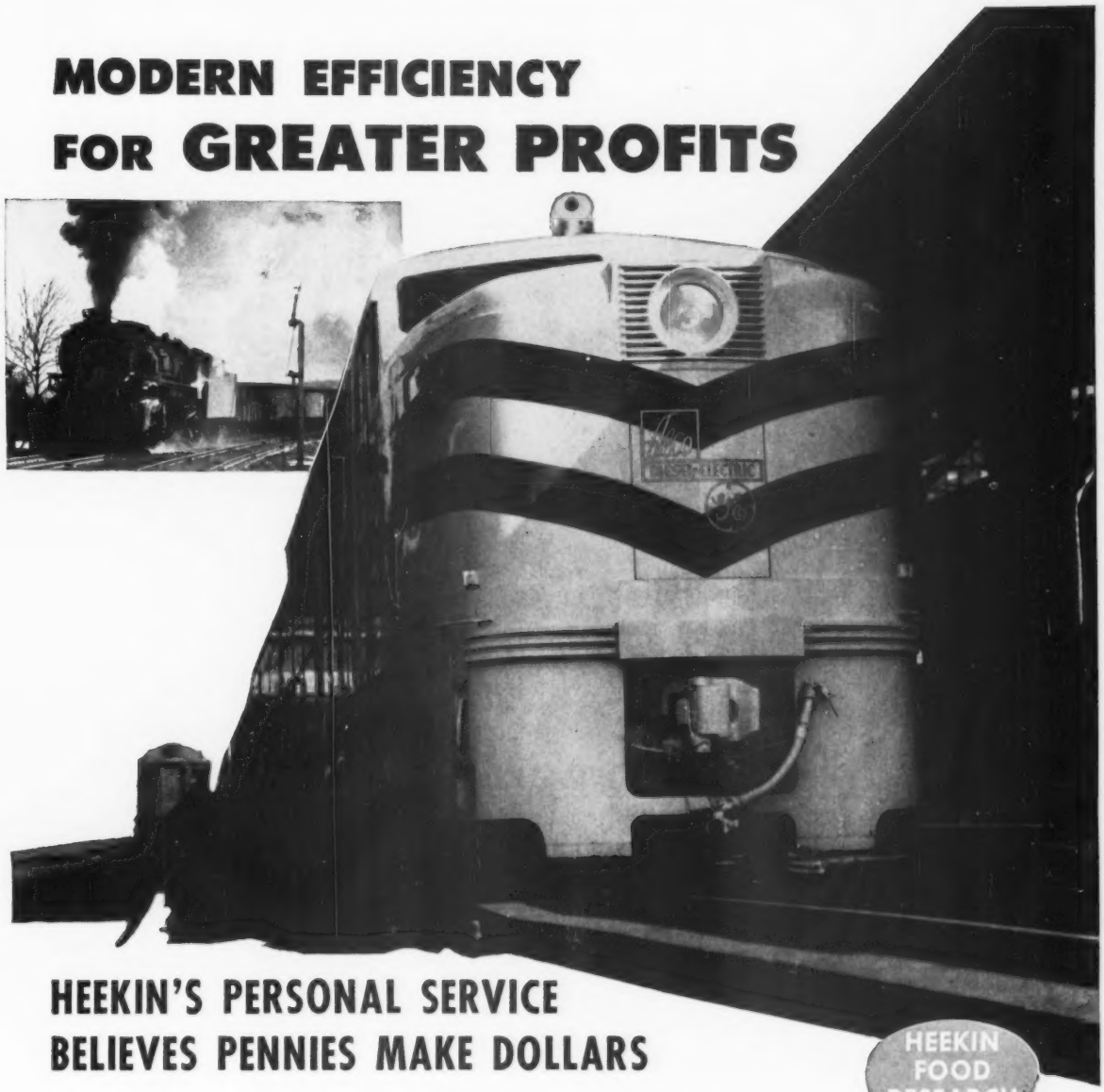
If you feel your cap isn't doing the best possible selling job, pick up the phone and call us. Let our packaging experts study your product and sales plan, then submit cap designs for your approval. They'll design a cap that will sell your product hard. There will be plenty of room for price marking, and the special no-wax finish on Armstrong's Metal Caps will make it easier to write or stamp prices on them.

Get further information about Armstrong's complete packaging service by calling your near-by Armstrong office or write Armstrong Cork Company, Glass and Closure Division, 9002 Prince Street, Lancaster, Pennsylvania.

Armstrong's Metal Caps

Packaging Headquarters for Armstrong's Glass Containers, Embossed-Top Corks, Crowns, Artmold Plastic Caps, and Du Pont "Cel-O-Seal" Bands

MODERN EFFICIENCY FOR GREATER PROFITS



HEEKIN'S PERSONAL SERVICE BELIEVES PENNIES MAKE DOLLARS

HEEKIN is interested as much in the seasonal canner as the large, year-around operator—for we make cans for both. The seasonal canner, perhaps, needs the most help—in modern suggestions of changes, merchandising, production, new items and trends in consumer demand. Heekin's various services are yours for the asking. For fifty-two years, Heekin has served the canning industry—through good years—and bad—we have known the canning industry—and believed in it. Let's get together.

HEEKIN FOOD RESEARCH

HEEKIN FOOD ENGINEERING

HEEKIN'S FIFTY-TWO YEARS of PERSONAL SERVICE

HEEKIN CANS

1901 — 52 Years of Service — 1953

PLANTS AT CINCINNATI AND NORWOOD, OHIO; CHESTNUT HILL, TENNESSEE AND SPRINGDALE, ARKANSAS

NATIONAL CANNERS
CONVENTION
Conrad Hilton Hotel
CHICAGO
FEBRUARY 21 TO 25

We'll be there . . .

BOOTH 237

we're looking forward
to seeing you at our

HOSPITALITY ROOM–966–A

and would like to have
you visit our Plant.

The
GRIFFITH
LABORATORIES, Inc.

In Canada—The Griffith Laboratories, Ltd.

CHICAGO 9, 1415 W. 37th St.
NEWARK 5, 37 Empire St.
LOS ANGELES 58, 4900 Gifford Ave.
TORONTO 2, 115 George St.

Food Packer

FEBRUARY 1953

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Dr. W. A. Gould, Quality Control Editor
Robert Y. Kerr, Washington Editor
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Thornell Barnes, Circulation Manager
Elmer Olin, Ass't. Circulation Manager

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Biographical sketch on Ezra Taft Benson . . . . . **Page 12**
Kerr discusses the background and training of Benson, the new Secretary of Agriculture, and other top farmers in the Administration.

Where do we stand in 1953, asks Fred Heinz . . . . . **Page 27**
NCA president predicts continued strong consumer demand, slightly higher prices, and small carryover for this year.

The Illinois Canning Co.–75 years of progress . . . . . **Page 28**
This successful canning company believes that careful control of the entire operation from procuring the raw product to loading the canned goods on carriers is necessary for packing high quality products.

Operations Analysis–a valuable management tool . . . . . **Page 33**
What effect has a new practice, policy, or decision on your business operations? Dr. Stier of the NCA discusses a new but fundamental and important approach to increased business efficiency.

How to operate a lift truck . . . . . **Page 38**
Here are pointers that will help beginners become experienced operators, and experienced operators rate their ability as drivers.

Color grading of fruits and vegetables . . . . . **Page 42**
Gould rounds up available information on color grading and says that success depends on concerted efforts of the entire industry.

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Vol. 34, No. 2 FOOD PACKER (formerly Canning Age.) Title registered in U. S. Patent Office. Copyright, 1952, Vance Publishing Corporation.

Office of publication: 1309 N. Main St., Pontiac, Ill. Executive and editorial offices: 139 N. Clark St., Chicago 2, Ill.

Subscription rates: U.S. and Possessions, Canada, $3.00 per year; two years, $5.00; three years, $7.00; other countries, $10.00 per year, two years, $15.00.

New York Office: 175 Fifth Av., ORegon 3-6883.

Entered as second class matter, August 2, 1952, at the Post Office, Pontiac, Illinois, under the Act of March 3, 1879. FOOD PACKER is published monthly except in October when published semi-monthly (including the Buyers' Guide and Reference Issue published in October) by Vance Publishing Corporation. Herbert A. Vance, President and Treasurer; A. A. Hood, Vice President; A. E. Monetti, Secretary; Eloise M. Kuhn, Assistant Secretary. Also publishers of American Lumberman, Wood & Wood Products, and Home Maintenance & Improvement.

Events to Come

February 9-14. Annual food processors school, Food Technology Dept., Oregon State College, Corvallis.

February 19-20. National Pickle Packers Assn., winter meeting, Sheraton Hotel, Chicago.

February 19-25. National Canners Convention and Canning Machinery & Supplies Association Show, Conrad Hilton Hotel, Chicago.

February 27-28. Virginia Canners Assn., annual meeting, Hotel Roanoke, Roanoke.

March 1-4. National Frozen Foods Convention, Conrad Hilton Hotel, Chicago.

March 5-6. Ozark Canners Assn., annual convention, Colonial Hotel, Springfield, Mo.

March 9-13. University of Maryland, National Canners Assn., Tri-State Packers, & American Society for Quality Control, statistical quality control school, University of Maryland, College Park.

March 13-14. Utah Canners Assn., annual convention, Hotel Utah, Salt Lake City.

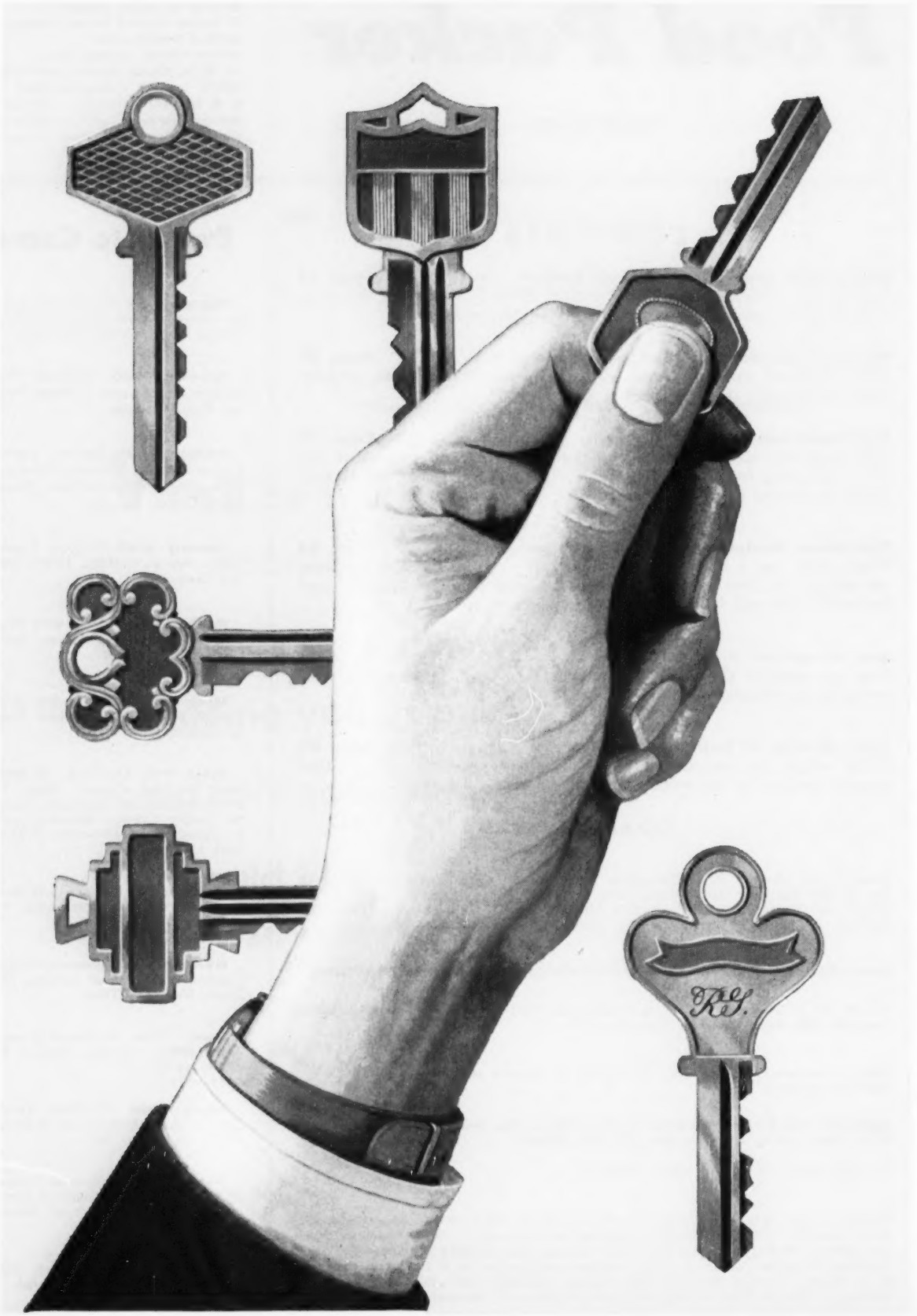
March 16. Tennessee-Kentucky Canners Assn., annual meeting, Noel Hotel, Nashville, Tenn.

March 17-18. Northwest Canners Assn., annual meeting, Chinook Hotel, Yakima, Wash.

March 19-20. Tri-State Packers Assn., spring meeting, Lord Baltimore Hotel, Baltimore, Md.

March 24-25. Wisconsin canners safety & canning technology conference, Loraine Hotel and Babcock Hall, Madison.

April 16. Indiana Canners Assn., spring meeting, Claypool Hotel, Indianapolis.


KW.

Maybe this is just the one for you!

Our staff of able men—whose lives are devoted to solving "unsolvable" problems—may have the precise key to your present container problem *right now.*

If they haven't, they will devote their time to fashioning a key that *will.*

You see, the equipment and facilities available to our 310 highly skilled scientists and technicians are not surpassed in the industry. Nor is their record of achievement.

Canco customers have been out in front *first* with almost every new and better container—and frequently with an improved product within that container. And that's the record not just for this year. Or last year. But since the turn of the century.

Go first to the people who are first!

AMERICAN CAN COMPANY

CANCO

New York, Chicago, San Francisco; Hamilton, Canada

The Sanitary can—perfected by Canco—made commercial canning of fruits and vegetables possible; revolutionized the grocery business; helped raise the national level of nutrition and health.

Through the years, constant Canco pioneering and cooperation with the canning industry have brought forth widespread process and product improvement—opening new markets for canned foods of all kinds.

People and Plants

D. L. Carton

H. W. Johnston

J. V. D. Sterre

Maurice Keating

B. H. Prentice

D. U. Kudlich

David L. Carton, assistant secretary of Lansing B. Warner, Inc., Chicago, retired on December 15 after 41 years of service. He is one of the charter members of the Warner 25-year club.

Hal W. Johnston, executive vice-president and director of sales for Stecher-Traung Lithograph Corp., Rochester and San Francisco, retired after 35 years of service. Mr. Johnston is a director and president of the Canning Machinery & Supplies Assn. He will remain on the board of directors of Stecher-Traung.

John Van Der Sterre was appointed a district sales manager in the frozen food sales division of John H. Dulany and Son, Inc., Fruitland, Md.

Lyndon M. King retired as president of Northrup, King & Co., Minneapolis. Mr. King, with the company since 1910, became chairman of the board of directors, a newly created position. **Maurice Keating,** formerly vice-president and general manager of the firm, became president on January 1.

Bryant H. Prentice Jr. became president and general manager of Kraft Foods Co. of Wisconsin, Green Bay, on January 1. He succeeds **J. I. Christophersen** who became chairman of the board.

Donakl U. Kudlich was appointed manufacturing coordinator for the machinery divisions of Food Machinery & Chemical Corp. **James M. Hait,** FMC's vice-president in charge of engineering, was elected to the board of directors and executive committee. **William L. Campbell,** vice-president and former co-manager of the company's ordnance division at San Jose, Calif., resigned recently.

Donald E. Matthews has been named plant manager of Anchor Hocking Glass Corp.'s Winchester, Ind. glass container factory.

The Morgantown Canning Co., Morgantown, Ind., has been re-incorporated with **J. D. Etchison** as president, **E. V. Etchison** as vice president, and **M. K. Marshall** as secretary-treasurer. The Morgantown plant is now packing tomatoes.

Amos Wheeler and **Jim Lewis** have purchased the G. N. Turner Canning Co., a pea cannery at Snohomish, Wash. The plant has been operated by G. N. Turner since 1920.

George G. Montgomery of San Francisco was elected a director of Dole Hawaiian Pineapple Co., Ltd. at a recent meeting of the company's stockholders in Honolulu.

Bayside Canning Co., Sanford, Va., has begun operations this year on 303 whole tomatoes. The partners are **Lester H. Fisher** and **Malcolm O. Bundy,** who pack oysters in season. The plant, warehouse, and boiler room are all new buildings.

H. M. Kirkby was appointed sales promotion manager of the steam generator division of Clayton Manufacturing Co., El Monte, Calif.

Daniel F. Gerber, president of Gerber Products Co., Fremont, Mich., was elected chairman of the board succeeding his father, the late **Frank Gerber,** who died recently after being associated with the company for 50 years.

Leon Raffauf was appointed sales engineer of The Max Ams Machine Co., Bridgeport, Conn. Mr. Raffauf formerly was associated with the Continental Can Co.

Dr. Alfred M. Boyce, director of the University of California citrus experiment station in Riverside, was named an assistant director of the University's agricultural experiment station.

William R. Kitchin was named manager of the institutional department of the Morton Packing Co., Louisville, Ky., producer of frozen convenience foods.

The Sacramento Frosted Foods Co., Inc., Sacramento, Calif., has taken over the plant and equipment, appraised at over $500,000, of A. D. Atterbury Co., Yuba City, Calif. freezing plant. The plant went into bankruptcy in 1950 and for more than a year has been leased and operated by the Sacramento Frosted Foods Co., **E. J. White,** president, announced.

The D. E. Winebrenner Co., Hanover, Pa., has realized a 100 percent U. S. Grade A Fancy Pack of whole kernel yellow sweet corn and white shoe peg corn this season, according to **Ira W. Reichart,** superintendent of the company's New Park plant.

Fulham Brothers, Inc., east coast frozen seafoods packer, announces the appointment of Stockton.West.Burkhart.Inc., Cincinnati and New York, as its advertising agency.

Lowell E. Tjaden was appointed to the new post of national sales manager of S & W Fine Foods, Inc., San Francisco.

Frank A. Herrick was appointed Magnus, Mabee & Reynard sales representative for Minnesota and North and South Dakota. **Miss Ann Hoop** is now with the MM&R Chicago office staff.

Louisville (Ky.) Food Brokers Assn. officers for 1953 are: President, **Robert D. Oppenheimer,** Holloway-Oppenheimer; vice-president, **Glen Terrill,** Terrill Brokerage Co.; secretary-treasurer, **C. R. Murphy,** Murphy Brokerage Co.; assistant secretary, **George E. Adams.** These officers with the immediate past president, **Stanley G. Voelker,** constitute the board of directors.

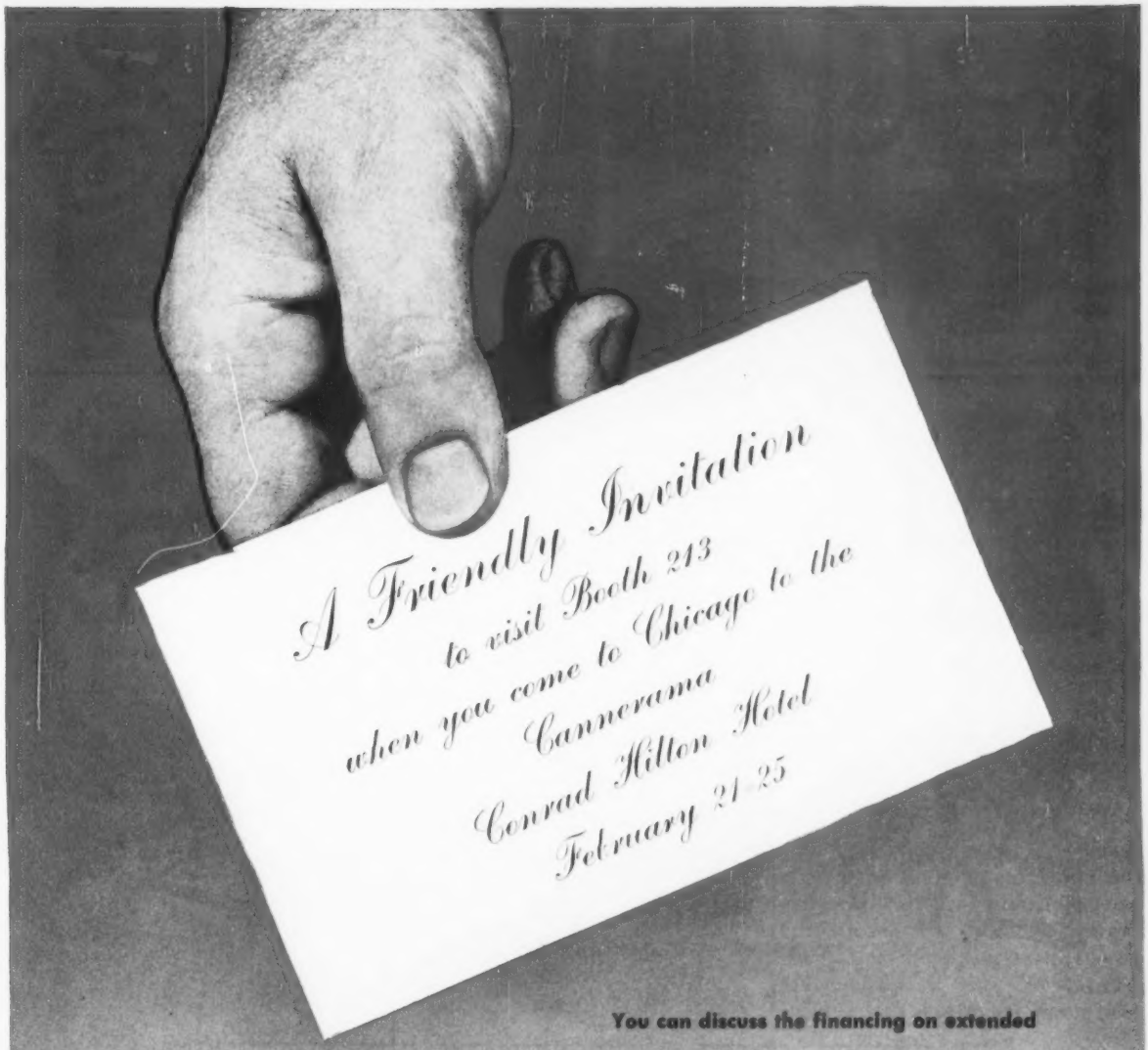
William H. Enzie was named manager of packaging and development in the Birds Eye division of General Foods, New York.

Dr. William Reynolds Paden, agronomist of the South Carolina Agricultural Experiment Station, Clemson, was elected a fellow of the American Society of Agronomy.

David Stern, treasurer and general manager of the Stern Can Co., Inc., Boston, was elected president of the Can Manufacturers Institute, succeeding **Richard P. Swartz.**

The Greencastle Packing Co., Greencastle, Pa., has completed plans for a quarter million dollar improvement and expansion program. Work on a new building will be started early in 1953.

(Continued on page 23)



You can discuss the financing on extended terms of any of the new equipment and machinery on display at the Cannerama. Just drop by *Booth 213* to learn how our funds can be placed at your disposal . . . or simply call or write one of the offices listed below for immediate assistance with your expansion or modernization programs.

C. I. T. CORPORATION

INDUSTRIAL AND EQUIPMENT FINANCING

NEW YORK, NEW YORK • CHICAGO, ILLINOIS • CLEVELAND, OHIO • ATLANTA, GEORGIA

HOUSTON, TEXAS • LOS ANGELES, CALIFORNIA • SAN FRANCISCO, CALIFORNIA

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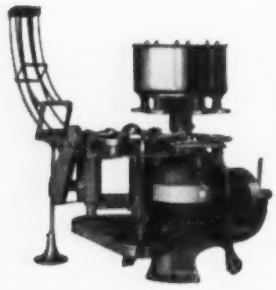
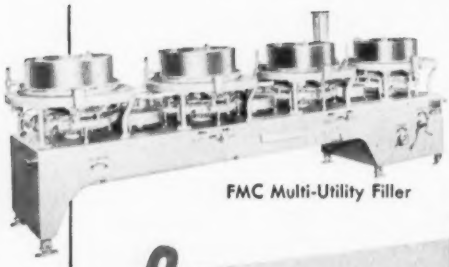
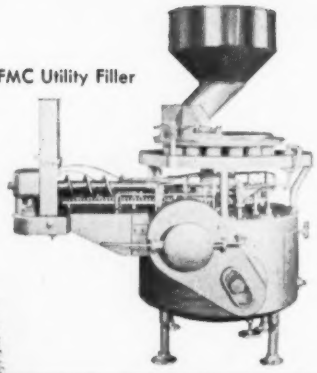


FMC 6-Valve Juice and Pulp Filler

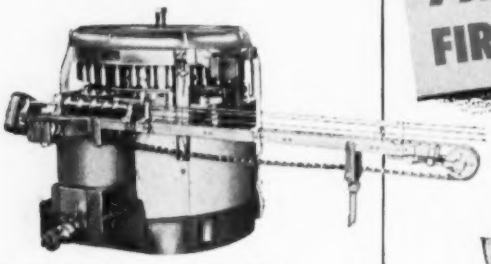


FMC Multi-Utility Filler

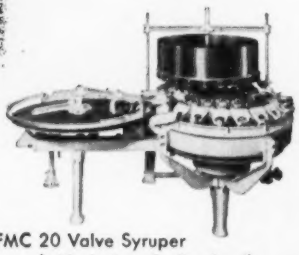


FMC Utility Filler

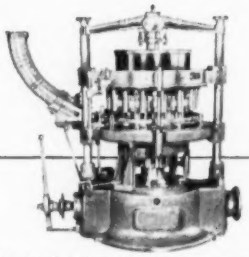
fmc FIRST IN FILLERS



FMC M&S 30 Pocket Plunger Filler

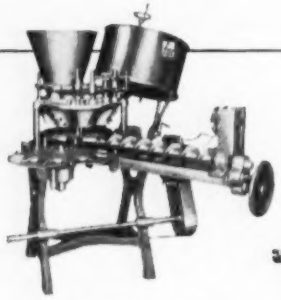


FMC 20 Valve Syruper
(with drainer & disc feed)



FMC M&S 15 Pocket Plunger Filler

FMC Hand Pack Filler



FMC 8 Station Pea & Bean Filler

FMC Model 15 Carton Filler

DEPENDABLE FILLERS OF EVERY TYPE FOR EVERY NEED

Through long experience in working with canners for the best solution of particular filling problems, FMC has developed and perfected a complete line of filling machines designed to—

- **Speed up and simplify operations.**
- **Eliminate waste and loss through accurate product fill.**
- **Increase capacity through greater flow-line efficiency.**

The fillers shown above are typical of FMC's line of skillfully engineered machines. All have been thoroughly tested and proved to provide canners with the highest quality filling standards. Whether your requirements call for canning liquid, semi-liquid, whole or granular products, or for packaging frozen foods, there's a FMC Filler built to do the job more efficiently and economically.

Write for full information, or call your nearest FMC representative.

FOOD MACHINERY AND CHEMICAL CORPORATION

Canning Machinery Division

General Sales Offices:

WESTERN: SAN JOSE 6, CALIFORNIA **EASTERN:** HOOPESTON, ILLINOIS

Only a few SECONDS old!

A basic fact:

When you put a Vapor-Vacuum Seal on any food, TIME stops!

Hence, the effective age of that food is just the seconds it takes between filler and sealer.

Father Time is having a hard time of it in the packaged food business nowadays. Especially when he tackles glass-packed foods! For here he runs into the hard, cold fact that *he can't operate in a vacuum!*

And when the vacuum in a food package is PERMANENT—*as it is in any Vapor-Vacuum Sealed package*—time is completely robbed of its sting.

Fresher than any daisy

The packer who takes advantage of the Vapor-Vacuum way to defeat time can truthfully say that his foods are only seconds old when they're opened. For all practical purposes, the age of his package is only the number of seconds it took to travel from the filler to the sealer.

Because once his package leaves the sealer, Old Man Time can't touch its Vapor-Vacuum protected contents.

That's why consumers get so many glass-packed foods fresh as the minute they were packed—with all the original flavor, color and goodness absolutely unchanged.

You don't need a calendar to measure its age! You can do it better with a stop watch

"VAPOR-VACUUM"
Seal and Re-Seal

PRODUCT OF
WHITE CAP COMPANY

CHICAGO · NEW YORK · SAN FRANCISCO
ROCHESTER · PHILADELPHIA · LONDON, ENGLAND

Washington and You

Robert Y. Kerr, Washington Editor

Biographical sketch on Ezra Taft Benson, Secretary of Agriculture

Kerr discusses the background of Benson and other top farmers in the new federal Administration

THE OFFICIAL TOP FARMERS in the federal Administration are important persons in the affairs of this industry, so here are a few answers to questions that get asked.

Ezra Taft Benson, Secretary of Agriculture, was born in Idaho, the state known as the "Gem of the Mountains." Much, though not all, of the Secretary's earlier career was in the mountain west.

Two of Mr. Benson's lifelong interests and fields of work have been the Church of Jesus Christ of Latter-day Saints and, of course, agriculture. He's a great-grandson of the Mormon Apostle, Ezra Taft Benson, who came into Salt Lake Valley with Brigham Young in 1847. As it seems many young members of this Church do, he interrupted his college education to serve for two years as a missionary. In 1947 he became a member of the Council of Twelve, often called the Twelve Apostles, of the Church. In 1946 he was appointed president of the Church's European mission with the responsibility of distributing relief supplies through its welfare program.

Attended four colleges

The Secretary attended the Utah Agricultural College, Brigham Young University, Iowa State College, and the University of California. For a time he was in the extension division of the University of Idaho, and in 1931 he was asked to head the department of agricultural economics and marketing. He's been active in co-operatives and in 1939 was appointed executive secretary of the National Council of Farmer Co-operatives. Since 1942 he's been a member of the executive committee of the American Institute of Co-operation. He was director of the Farm Foundation from '46 to '50; was appointed by President Roosevelt a member of the National Agricultural Advisory Committee during World War II; was a member of the National Credit Committee, '40-'41; United States delegate to the first International Conference of Farm Organizations in London; and last August was named chairman of the board of trustees of the American Institute of Co-operation.

EZRA TAFT BENSON
Secretary of Agriculture

This isn't a complete story, but it indicates that the Secretary gets along with people and knows his way around Uncle Sam's farm.

Undersecretary of Agriculture True D. Morse has been head of the Doane Agricultural Service, Inc., a farm management company. He calls himself a Missouri farm boy; is a graduate of the College of Agriculture, University of Missouri; was reared as a Democrat but shifted to the GOP some 20 years ago; helped write the farm plank in the '52 Republican platform. He's worked for the Missouri State Farm Bureau and has been executive secretary of the Missouri Federated Co-operative Livestock Shipping Association.

William I. Myers, dean of the College of Agriculture, Cornell University, was named chairman of the Interim Agricultural Advisory Committee, an organization intended to aid Secretary Benson in getting his new work going. At the big plowing contest in Kasson, Minn., General Eisenhower promised the farmers a bi-partisan Federal Agricultural Commission and this interim committee is expected to function until the commission is formed. It's possible that many or perhaps all the 14 members of the committee will be appointed to the commission.

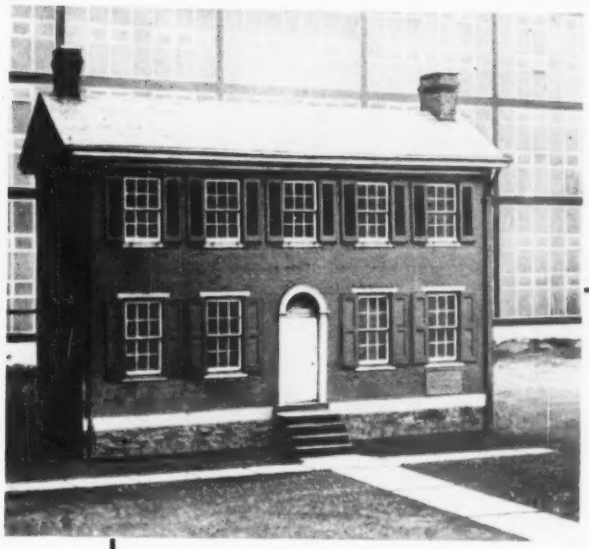
Members well known

The committee members are widely known in farm circles. Dean Myers has taught farm management and financing at Cornell, and he has a long record of federal service. In 1933 he was assistant to the chairman of the Federal Farm board, and he also served in the '30's as governor of the Farm Credit Administration. He's now a director of the Federal Reserve Board of New York. He's also a director of Continental Can, and likewise of United States Industrial Chemicals, Inc.

Everybody, including his grandfather's great-aunt, knows the Supreme Court has hung a shanty on the eye of the Federal Food, Drug and Cosmetic Act, in regard to inspecting a food plant without the consent of the plant boss. But we'd better take a passing look at it, anyway, since the case clearly isn't closed. Sure enough, what the big court says always goes, but F&D intends to ask Congress for some amendments to meet the court's objections. Feels obliged to do so.

The case of the U. S. vs. Ira D. Cardiff, dealing with Dr. Cardiff's refusal to admit FDA inspectors to his apple dehydrating plant, brought out more than the self-contradiction in the law, although that was the factor the court took a crack at. The Act, before it got slugged, held first that the inspectors had to get entry permission and second, that if the boss didn't give the permission he could be stuck into jail or otherwise caused

(Continued on page 86)



THE LITTLE HOUSE WHERE WE BEGAN

This "Little House" was originally located in Sharpsburg, Pa. It was the home of H. J. Heinz, the founder of the company which today bears his name and where the first of the now famous 57 varieties was produced.

In 1904 it was moved by barge a few miles down the Allegheny River to Pittsburgh and given a place of honor at the present site of the Heinz Pittsburgh Kitchens.

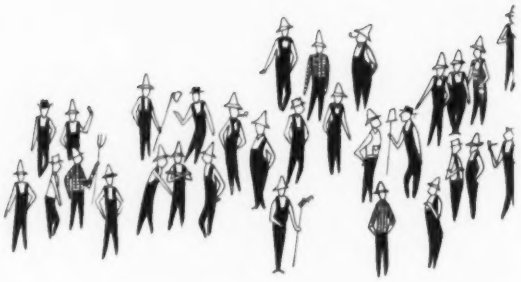
Now because future plans made it necessary to move the house once again, it has been taken to Henry Ford's Greenfield Village at Dearborn, Michigan to join with other historic buildings, homes and shops which depict American progress.

Four generations of consumers and hundreds of thousands of visitors to the Heinz Kitchens in Pittsburgh have paid tribute to this house and all it stands for. It was the birth place, not only of the 57 varieties, but also of one of the pioneer companies in the quality food industry.

Over the years "the Little House where we began" has always been important to H. J. Heinz Company. It is a reminder that "to do a common thing uncommonly well" is as sound advice today as it was in 1869 when the first of the far-famed 57 varieties was produced in it.

H. J. HEINZ COMPANY 57

What TEPP* can do for



farmers:

Spray one day and harvest poison-free crops 48 hours later!

processors:

Cleaner crops that need less washing, fewer rejects due to last-minute infestations!

They all like remarkable TEPP—the pesticide that kills without leaving any lingering poisonous residue. When properly handled, TEPP can assure cleaner, higher quality crops that mean more profits for both farmer and processor.

Low cost, amazingly effective TEPP kills aphids, thrips, red spider mite, leafhopper nymphs, flea beetles and many other pests. TEPP is available 1) as a liquid concentrate, 2) as a stabilized dust, and 3) with other active ingredients. For quick kills and residue-free crops, specify TEPP formulations from your supplier. For the names of manufacturers of TEPP, write to Eastman Chemical Products, Inc., Chemicals Division, Kingsport, Tennessee.

TEPP*

means pest-free crops

poison-free crops

**Tetraethyl Pyrophosphate is made from triethyl phosphate—an Eastman chemical. TEPP is not supplied by Eastman Chemical Products, Inc.*

Eastman
CHEMICAL PRODUCTS, INC.
KINGSPORT, TENNESSEE

Sales representative for **TENNESSEE EASTMAN COMPANY,** division of **EASTMAN KODAK COMPANY**

Let's Talk Citric!

For Full Fruit Flavor . . . ALWAYS

Use Pfizer

CITRIC ACID ANHYDROUS

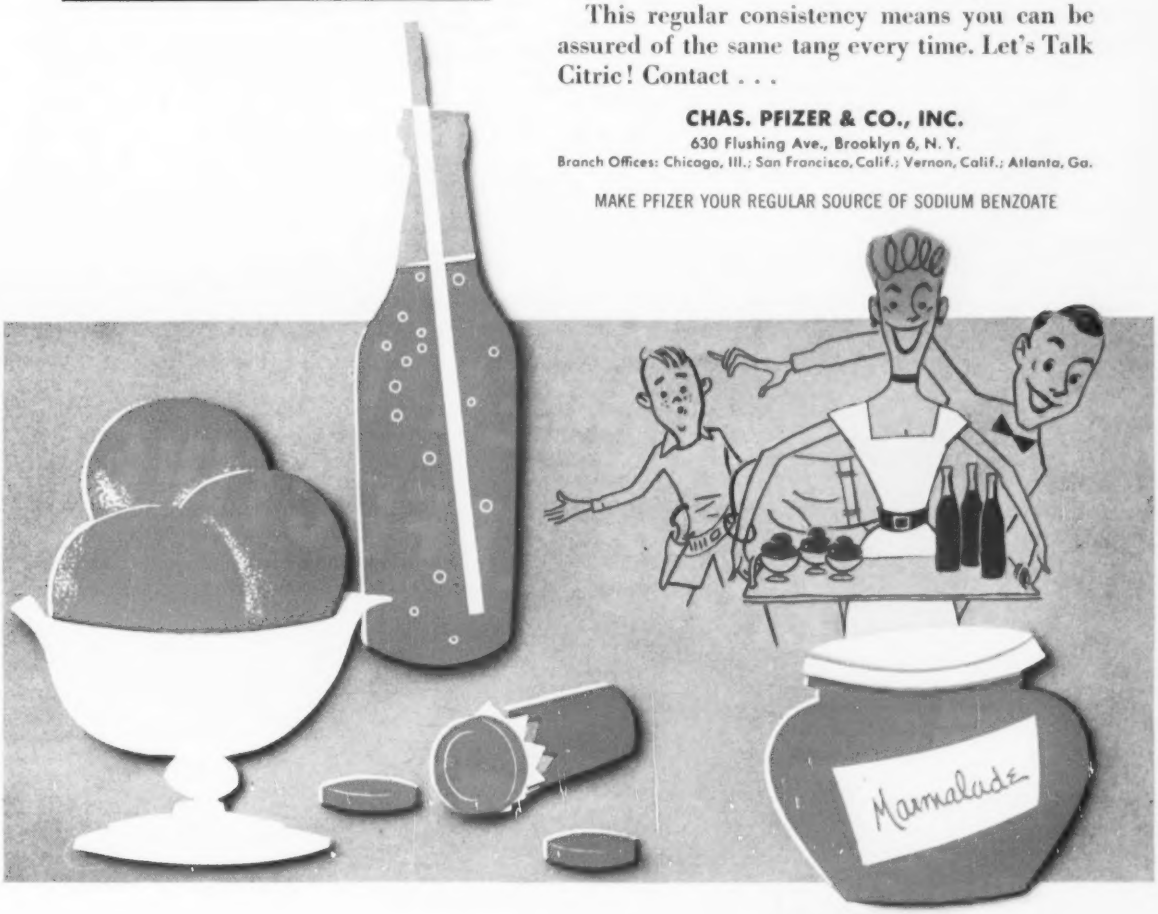
• Get the same full, fruity flavor every time in beverages, candy, jams, jellies or sherbets with Pfizer Citric Acid Anhydrous.

You'll always get uniform results in acidity with this outstanding acidulant. Here's why. Pfizer Citric Acid Anhydrous contains no water of crystallization. Consequently, it cannot dry out, even after long months of storage. It does not cake under proper storage conditions nor does it absorb water from the atmosphere.

This regular consistency means you can be assured of the same tang every time. Let's Talk Citric! Contact . . .

CHAS. PFIZER & CO., INC.
630 Flushing Ave., Brooklyn 6, N. Y.
Branch Offices: Chicago, Ill.; San Francisco, Calif.; Vernon, Calif.; Atlanta, Ga.

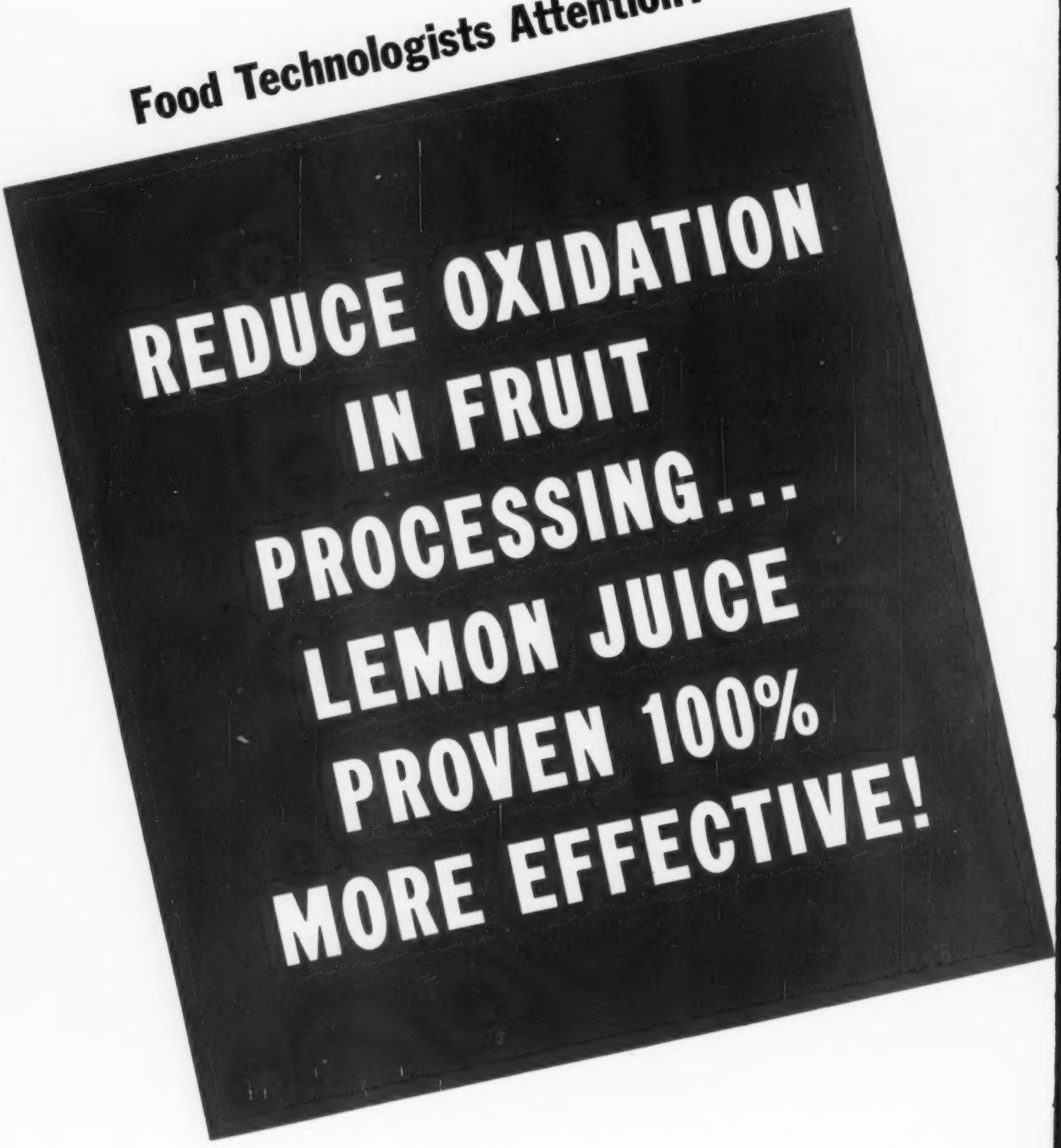
MAKE PFIZER YOUR REGULAR SOURCE OF SODIUM BENZOATE



Manufacturing Chemists for Over 100 Years

Pfizer

Food Technologists Attention!



4 ADDED benefits at ½ the cost!

The problem of "browning" and flavor loss that every fruit packer knows has now been greatly reduced. Latest research into the anti-oxidant properties of lemon juice has revealed startlingly effective qualities heretofore unexplored.

Lemon juice is a *natural* anti-oxidant. When used in processing, higher quality levels are obtained. The *full* flavor of your fruit is held and, in fact, sharpened, and the fruit also retains more of its natural color. Off-flavor development is retarded or completely eliminated. You'll be turning out a finished product with flavor *freshness.*

The secret of this newly-discovered superiority lies in the fact that when you use EXCHANGE Lemon Juices you get the *full* unrefined values of their citric and ascorbic acid content, PLUS the additional benefits found *only* in the natural, unprocessed fruit product.

- **Lemon juice contains natural bioflavonoid anti-oxidants for more effective preservative action.**
- **Lemon juice is a buffered system which permits a great range of dilution.**
- **Lemon juice has a low surface tension which accelerates penetration.**
- **Lemon juice has a delicate aroma and subtle taste that improve all fruit flavors.**

And in *addition* EXCHANGE Lemon Juice is *cheaper* to use than the anti-oxidant you're now using! In solution, ounce for ounce, lemon juice is *equally effective* as anti-oxidants *costing over twice as much!*

Use EXCHANGE Lemon Juice in just one production run and prove to yourself its superiority. Or write us for detailed analysis of its amazingly effective anti-oxidant properties.

EXCHANGE Lemon Juices are all made from fine lemons from the groves of sunny California. They are packed four different ways for your production needs:

EXCHANGE Single Strength Lemon Juice (with 1% benz.)—in barrels.
EXCHANGE Single Strength Lemon Juice—pure—in gallon tins.
CALEMONA Concentrated Lemon Juice—in gallon tins or barrels.
CAL-GROVE Frozen Single Strength Lemon Juice—in gallon tins.

Sunkist Growers

PRODUCTS DEPARTMENT • ONTARIO, CALIFORNIA

400 West Madison Street, Chicago 6, Illinois
99 Hudson Street, New York 13, N. Y.
318 Cadiz Street, Dallas 2, Texas

It's smart to stick with Swift's Adhesives

They serve you and the grocer, too!

In modern, self-servicing merchandising—where eye appeal often makes the sale—Swift's Adhesives serve successful manufacturers in many important ways. For example, they provide a lasting bond for labels on cans, bottles and jars . . . maintain the appearance of paper products . . . keep packages neatly sealed.

When you need adhesives, always remember—

- Swift has years of specialized experience in adhesives production.
- Swift works with a broad range of quality raw materials.
- Swift has extensive adhesives manufacturing facilities . . . distribution points from coast to coast.

Three adhesives for food producers:

Hot Pick-Up Gum—Swift offers good selection for hot or cold cans or glass. Effective on fast or slow lines.

Lap Pastes—that cut wrinkling, resist the effects of sweating. Economical . . . smooth running.

Case Sealer—the right kind for every use. A wide selection including fast sealing adhesives for cases that are placed immediately in freezers.

Flotill Products, Inc., Stockton, California, makes good use of Swift's Adhesives. One of the most important applications is the sealing of labels neatly, attractively on bottles and cans.
CRACKERS
FLOTILL
CHILI SAUCE
Jelly

Call **SWIFT** first for **ADHESIVES**

Swift & Company
Adhesive Products Department
Chicago 9, Illinois

This offer expires March 31, 1953

Please send your ——lb. introductory trial shipment of

☐ Hot Pick-Up Gum. (Describe can temperature range)
☐ Lap Paste. (Describe type of operation)
☐ Case Sealer. (Describe pressure time)

These products, at the quantity price, will be tested for use in our operations. We understand, if not fully satisfactory, they may be returned for credit at your expense.

Name _____ *Title* _____

Firm Name _____

Address _____

City _____ *Zone* _____ *State* _____

The Vacuum Seal with Sales Appeal!

This is the cap that has everything housewives want. It's the answer to their hope for a better, handier vacuum seal closure.

It goes without saying that the Crown Vacuum Lug Cap gives dependable sealing. That's the number one requirement . . . but look at the other customer winning features this cap offers:

We want an opportunity to tell you more about this wonderful cap and the machine that applies it automatically at high speed . . . the Cem Vacuum Lug Capper. A phone call or letter will bring complete information.

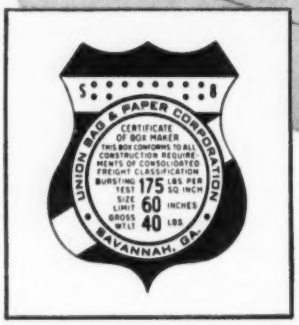
CROWN *Vacuum Lug Caps*

CROWN CORK & SEAL COMPANY *Closure Division • Baltimore 3, Maryland*

Visit Crown at Booth No. 7 at the Canners' Show in Chicago • February 21st — 25th • Conrad Hilton Hotel

What's a Pedigree to do with Containers?

THE GOLDEN RETRIEVER inherits his canine intelligence and kindliness from sheep-herding forebears. The rich, golden, water-resisting coat, his steadiness and willingness to tackle difficult situations, makes the Golden Retriever a wonderful hunting companion admirably suited to severe cold and icy waters.


UNION BAG & PAPER CORPORATION
CERTIFICATE OF BOX MAKER
THIS BOX CONFORMS TO ALL CONSTRUCTION REQUIREMENTS OF CONSOLIDATED FREIGHT CLASSIFICATION
BURSTING TEST 175 LBS PER SQ INCH
SIZE LIMIT 60 INCHES
GROSS WT LT 40 LBS
SAVANNAH, GA.

JUST THIS: Union corrugated boxes have a pedigree going back in an unbroken line to the forests owned or cultivated by Union . . . to Union's huge mills and fabricating plants.

That's why every Union box is uniform. That's why you can be sure every carload shipment will measure up to the same high standards as submitted samples or previous orders.

Minute Maid Corporation values Union's *pedigreed* boxes to be sure its famous Minute Maid frozen orange juice gets there *safely*. It is one of scores of America's leading manufacturers who pick the winner—the *pedigreed* Union Container.

TRADE MARK
UNION

Dependable Packaging Since 1872

UNION Corrugated Containers

UNION BAG & Paper Corporation

Principal Offices: WOOLWORTH BLDG., NEW YORK 7, N. Y.

Corrugated Container Plants: **SAVANNAH, GEORGIA • CHICAGO, ILLINOIS • TRENTON, NEW JERSEY**

Experts agree . . .

Fine foods are a matter of

Good Taste

use **STANGE** CREAM·OF·SPICE **SEASONINGS**

WM. J. STANGE CO.

CHICAGO 12, ILL. OAKLAND 21, CALIF.

In Canada: Stange-Pemberton, Ltd. New Toronto, Ont.

PRINTED IN U. S. A.

One fungicide—DITHANE—will help keep *many* plants healthy from planting to harvest time.

DITHANE sprays or dusts are best known for the dependable way they keep potatoes and tomatoes free of disease. But DITHANE's ability to solve disease control problems does not stop here.

It will pay you to know this fact: DITHANE is a fungicide which is recommended and used to control many diseases on many important crops.

The list of crops protected and plant diseases controlled by DITHANE is increasing. This list ranges from apples to watermelons—and includes the important vegetables, fruits and flowers.

For further information on DITHANE's wide range of usefulness as a farm fungicide consult local authorities—or write us for literature.

For all-around, low cost disease control...

DITHANE

DITHANE is a trade-mark Reg. U.S. Pat. Off. and in principal foreign countries.

CHEMICALS FOR AGRICULTURE

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

R. C. Chandler

J. F. Mahoney

K. S. Upham

R. G. Fisher

B. F. Buchanan

H. S. Luther

R. C. Chandler was elected vice-president in charge of board and corrugated container sales for Union Bag & Paper Corp., New York.

James F. Mahoney was appointed national institutional sales manager of Snow Crop Marketers, division of Clinton Foods, Inc., New York.

Kent S. Upham and **Robert E. Graham** have been appointed, respectively, sales manager and assistant sales manager to the food industries of Owens-Illinois Glass Co., Toledo, Ohio.

Raymond G. Fisher was appointed director of economic research of Continental Can Co., New York. **Allen P. Vining** was named general sales manager of Bond Crown & Cork Co., a wholly-owned subsidiary of Continental.

Dr. Ben F. Buchanan was appointed manager of the pharmaceutical department of the Amino Products division of International Minerals & Chemical Corp., Chicago.

Harold S. Luther, formerly assistant product manager of the Birds Eye division of General Foods Corp., has been appointed sales manager of Norwegian Frozen Fish, Ltd., Jersey City, N. J.

John C. Clay, on leave as assistant to the executive vice-president of National Starch Products Inc., New York, was promoted to deputy assistant administrator of National Production Authority.

William E. Vaughn was named assistant to the vice-president in charge of sales for American Can Co., New York.

Charles E. O'Brien was transferred from the New York sales office of Crown Can Co. to their St. Louis office as a sales representative.

Knouse Foods Cooperative, Inc., Peach Glen, Pa. has appointed N. W. Ayer & Son, Philadelphia, to handle its advertising program.

John O. Forsberg was appointed assistant controller of Booth Fisheries Corp., Chicago.

T. G. Redman, Swift & Co., Chicago, was elected comptroller to succeed **J. F. Brandt** who retired.

Dr. Arthur N. Prater, technical director of the Gentry division of the Consolidated Grocers Corp., Los Angeles, was elected chairman for 1953 of the American Chemical Society's division of agricultural and food chemistry.

Charles P. Walker was named vice-president of Van Ameringen-Haebler, Inc., New York, manufacturers of aromatic chemicals.

Dr. Roy C. Newton, Swift & Co. vice-president in charge of research, was elected president of the newly organized Agricultural Research Institute, Washington, D. C. **Paul D. V. Manning** of International Minerals & Chemical Corp. was elected vice-president and **B. S. Clark,** American Can Co., secretary.

John W. Fisher was appointed director of sales for the commercial glass container division of Ball Brothers Co., Muncie, Ind.

Florida Fruit Canning Co., Bradenton, Fla., started operations in a $150,000 plant at Riviera Beach, Fla. on January 1. Pineapple and other tropical fruits will be produced.

Donald H. Brewer was elected a vice-president of Container Corp. of America, Chicago.

William H. Caddoo and **Wilfred W. Scheide** were appointed assistants to the vice-president in charge of the folding carton division of Robert Gair Co., Inc., New York.

American Can Co. has arranged for construction of a new container warehouse adjacent to its Portland, Ore. factory at 2127 N. W. 26th Ave. The warehouse will provide space for the storage of up to 75,000,000 cans at a time.

Dodge & Olcott, Inc., announce the removal of their Chicago sales office to 308 W. Randolph St.

Jim S. Porter Co., merchandise brokers of Little Rock, Ark., have changed their firm name to **Wolfe-Saunders Co.**

The James A. Weaver Co. opened a sales office at Kingston, Pa., it was announced by the Pennsylvania Canners Assn. Full operation began January 5.

Paul Plummer, manager, Lutz Canning Co., Defiance, Ohio reports that his company expects to install a tomato juice line for the 1953 pack.

Donald B. Black is now in charge of fine chemical sales for the Dow Chemical Co., Midland, Mich. **Dr. J. E. Johnson** was appointed to the new Dow position of director of agricultural chemical research.

Dr. Philip K. Bates was named general manager of research of the Carnation Co. He will administer research activities at the Carnation Research Center, now under construction at Van Nuys, Calif.

General Lucius D. Clay, chairman of the board of directors, Continental Can Co., and former U. S. military governor in Germany, was appointed to the New York state Defense Bonds Advisory Committee.

The Illinois Canning Co., Hoopeston, Ill. gave employees partial bonus checks totaling $15,500 at the company's annual Christmas party.

The Green Giant Co., Le Sueur, Minn. has announced the appointment of **Preston Radebaugh** as executive assistant to **G. S. Scott,** vice-president in charge of production and research.

A. Earle Clark & Son, Miami, Fla. food brokers, will be represented at the National Food Brokers Assn. convention in Chicago, February 20-26, by the following partners: **A. Earle Clark, Jr., Duncan L. Owens, John W. Owens.**

James T. Akehurst was elected assistant vice-president of operations for Archer-Daniels-Midland Co., Minneapolis.

John L. Dolphin, vice-president in charge of sales for Sealright Co., Inc., Fulton, N. Y., died in Syracuse, N. Y. on December 23. He is survived by his widow, two daughters and a son.

Henry P. Taylor, Jr., 30, son of Henry P. Taylor, past president of the National Canners Assn., died December 27 in a St. Augustine, Fla. hospital from injuries received in an automobile accident near there a week earlier.

Glen F. Mason, 69, former manager of West Coast operations for H. J. Heinz Co., died December 22 after a long illness.

DO YOU KNOW THE TOP MAN IN OUR COMPANY?

In some companies it's the president who is the real boss. In others it's the chairman of the board. In our company it's you — the customer.

We sincerely mean this. Our entire operation is based on the idea of giving each customer service that is hand-tailored to fit his individual requirements.

That means you get the right container for your product and processing methods. You get deliveries scheduled to your needs and not our convenience. Research, engineering and trouble-shooting services are available in the amount you need — when and where you want them. We have only one rigid idea: *The customer is top man and it's our job to please him.* Won't you give us a chance to prove it?

CONTINENTAL CAN COMPANY

CONTINENTAL CAN BUILDING •
100 EAST 42ND STREET • NEW YORK 17, N. Y.

Eastern Div.: 100 E. 42nd St., New York 17 • Central Div.: 135 So. La Salle St., Chicago 3
Pacific Div.: Russ Building, San Francisco 4

FEBRUARY 1953

Food Packer

VOL. 34, No. 2

CANNING • GLASSPACKING • FREEZING

BETWEEN THE LINES

Pre—Convention issue

The National Canners Association Convention opens at the Conrad Hilton, Chicago, Friday, February 20 and runs through Tuesday, February 24

A complete list of exhibitors appears on pages 69 and 71

Turn to page 46 for the convention program

Mr. Carter (left) gives award to Mr. Prince.

Oakite gives award

L. T. Prince, technical service representative of Oakite Products, Inc., was awarded a bronze plaque by company president John A. Carter. The award is presented annually to the member of the firm's field organization adjudged to have rendered the most outstanding service to industry during the year. Presentation of the award is given in memory of David Clifton Ball, pioneer in industrial cleaning procedures and founder of the Oakite company.

Scheduled events for the 1953 convention

49'er cocktail party and meeting: West Ballroom, Conrad Hilton Hotel, Friday, February 20; meeting, 5:00 p.m., cocktail party, 6:00 p.m.

Old Guard Party: North Assembly Room, Conrad Hilton, Saturday, February 21, 6:00 p.m.

Canning Machinery & Supplies Association annual meeting: West Ballroom, Conrad Hilton, Sunday, February 22, 10:30 a.m.

Young Guard Banquet: Terrace Casino, Morrison Hotel, Monday, February 23, 7:00 p.m.

Canning Machinery & Supplies Association dinner-dance: Grand Ballroom, Sheraton Hotel, North Michigan Avenue, Tuesday, February 24, 7:00 p.m.

Big year ahead-Canco

The American Can Co. expects to break sales records again in 1953, for the third straight year, according to President William C. Stolk. He says his company's position is a good barometer of what may happen to American business generally during 1953.

"American Can's sales and rentals are likely to go as high as ten percent above 1952 if can-making supplies remain adequate and if government controls are removed," Stolk declared. The metal and fibre container industry as a whole should show increased sales during the year.

"This anticipated increase in container sales is a good indication of the prospects for the economy generally during the coming year, since our industry touches a major part of the country's industries in one way or another."

49'ers name entertainment committees

The 49'ers, service group of the Canning Machinery & Supplies Association, has named the following committees, and chairmen and vice-chairmen, to operate at the "Canner-ama" convention of the National Canners Association:

49'er cocktail party committee: Paul

Cover, United Co., chairman; Carl Markley, Crown Can Co., vice-chairman.

Old Guard committee: Edward Judge, Canning Trade, chairman; Harry Miller, Burt Machinery, vice-chairman.

Young Guard committee: Richard Watt, Waukesha Foundry, chairman; Joe Wagley, Crown Can Co., vice-chairman.

Dinner-dance committee: David Nay, W. J. Stange Co., chairman; William Neighbert, Link-Belt Co., vice-chairman.

The Diversey Corp. is studying the field of applied nuclear research in an effort to develop new and improved materials for food plant sanitation. Here, Rosemary Annos and Leslie Alt take the count per minute of a radio-active sample from the nuclear scaling unit at left. This is part of the equipment Diversey is using to apply nuclear research to food industries.

Swartz honored by C.M.I.

Richard P. Swartz (left, above), retiring president of the Can Manufacturers Institute, and consultant, American Can Co., is presented with a silver tray in recognition of his services to the Institute by Dan M. Heekin, president of the Heekin Can Co. and a member of the C. M. I. board. The presentation was made at the recent meeting of the Institute's board of governors in New York City.

Frank-kraut anniversary

This winter marks the 100th wedding anniversary of the famous marriage between the frankfurter and sauerkraut. The official observance of this happy event will be February 5-14, National Kraut and Frankfurter Week, according to the National Kraut Packers Association.

Back in 1852, in Frankfurt, Germany, so history regales, a German butcher concocted a sausage and called it a "frankfurter" in honor of the old home town. This sausage knocked around for awhile in company with an occasional spareribb or pork shank. Finally it teamed up with sauerkraut, and the union was a decided success.

Like many other European delicacies, it finally came to America where it became virtually a national food. In fact, last year, Americans ate 6,314,000,000 frankfurters and 200,000 tons of sauerkraut.

Mrs. Ellis receives a corsage from Squire Dingee sales manager, R. O. Fellows.

A corsage for Esther

For winning a sales contest in which she competed against an all-male group of fellow food brokers, Mrs. Esther Ellis, one of the few women in the nation that heads their own food brokerage organizations, is shown receiving a corsage from R. O. Fellows, sales manager of the Squire Dingee Co. of Chicago.

Mrs. Ellis, president of H. V. Ellis & Co., Columbus, O., assumed management of the company nine years ago when her husband died.

Pennsylvania growers reach 20 tons or more

Twenty-two Pennsylvania growers of tomatoes for processing who produced 20 tons or more per acre in 1952 were honored for their efforts during "Tomato Day" at the annual Farm Products Show at Harrisburg, January 13, according to the Pennsylvania Canners Association.

Framed certificates were presented to the "Master Tomato Growers" as the first members of Pennsylvania's new 20-ton tomato production club. Engraved plaques were presented to the high-yield and high-quality winners for each of the following three classes: growers with eight or more acres; growers with three to eight acres; and growers with one to three acres.

Billy Davies (center), Thatcher personnel counselor, accepts the award from Harvey B. Stout (right), State Legion employment officer. J. K. O'Brien, manager of Thatcher's plant at Lawrenceburg, Ind., is shown at left.

Thatcher Glass plant wins Legion award

National recognition was received recently by Thatcher Glass Manufacturing Co., Inc., when the American Legion presented its Lawrenceburg, Indiana, glass container plant with a certificate for its "remarkable record" in the employment of veterans, particularly those who are physically handicapped.

At present, 85 percent of all male employees at the Indiana plant are veterans, and 21 percent of these employees have a physical disability.

Where are we for '53?

Continued strong consumer demand, slightly higher prices, and small carryover this year predicted by Fred Heinz, president of National Canners Assn.

FRED C. HEINZ

Vice-president of the H. J. Heinz Co. and president of the National Canners Association

THE HIGH LEVEL OF CANNED FOOD consumption of 1952 is expected to continue through the greater part of 1953. The defense effort will probably continue to increase. Thus, in spite of the possibility of a slackening off of production in some other fields, these factors probably will insure the maintenance of record employment and consumer income for 1953. The per-capita civilian demand for canned foods during 1953 should, therefore, be maintained at the high level of 1952.

Consumption of canned foods by the Armed Forces will be affected by the magnitude of the Korean effort, which cannot be forecast at this time. A step-up in the Korean campaign might increase military procurement for canned foods. If, however, the campaign is continued at the present pace, the requirements for the Armed Forces for 1953 may be somewhat smaller than those of 1952. Increases in civilian population would tend to add enough to the civilian demand to offset such slight decreases for the Armed Forces.

The general decrease in the exports and shipments of food from the United States in 1953 will doubtless have a similar effect upon the exports of canned foods but to a lesser degree. The relative shortage of dollar exchange in the food importing countries and the generally larger crops are the principal factors contributing to the expected decrease of food exports from the U. S. in 1953.

The important role that canned foods play in the civilian diet is due in large part to the combination of good quality, convenience, and fair prices to the consumer. As recently noted in the Journal of Commerce, the ability of food canners to hold the line on their prices has been a strong factor in their retention in a top spot in the nation's kitchen.

The nation's canned food consumption is now one-third larger than it was ten years ago. Population increased only 15 percent during that decade. It is significant to note that the increase in the consumption of canned foods has more than kept pace with the increase in population. Per-capita consumption in 1952 was 140 percent of that of ten years earlier.

Retail prices of canned fruits and vegetables have advanced only about half as much as average consumer income since the close of World War II. The net result of this relatively slow advance in the price of canned foods gives the consumer odds of 8

(Continued on page 89)

Supply situation

Total food supplies per person in prospect for 1953 will probably continue at about the same level as in the past three years. The supply of canned fruits and juices will be about the same or slightly less (two-three percent less) than was available to civilians in 1952. Canned citrus juice supplies are expected to be slightly smaller in 1953 than in 1952 despite expected larger packs. Canners carryover stocks at the beginning of the season were smaller than a year ago. Supplies of other canned fruit juices, including pineapple juice from Hawaii, are expected to be about as large as in 1952 and retail prices are expected to continue at about the same level as they reached in the latter part of 1952.

Canned vegetable supplies in 1953 will be somewhat smaller than were available during 1952. Smaller packs in 1952 were counterbalanced in part by larger carryover stocks so that total supply available for 1952 was down relatively little. Supplies of most canned vegetables did not change greatly from 1952 except for peas, beets, and carrots, which were down significantly, and corn, which was higher. The pressure of continued strong consumer demand may lead to slightly higher prices and a smaller carryover in the summer of 1953. This situation is likely to encourage larger packs in 1953.

The "big hook" unloads corn quickly and efficiently, eliminating what was once a tedious task. Wagons or trucks are hoisted by power and underground conveyors take ears to huskers inside the plant.

Part of the 36 corn cutters in the Hoopeston plant. A similar battery is located to the left of this line. The plant has a capacity of 1,100 tons of corn per day on its high-speed production lines.

The Illinois Canning Company—

Seventy-five years of continuous progress

BILL SCHAAL, Editor

IF YOU TRAVEL THE FOOD LANES in the Southland, from the cross roads stores in the hinterland to the big food distribution centers, you'll find the Joan of Arc label of the Illinois Canning Company in evidence everywhere.

This company, with headquarters at Hoopeston, Illinois, in the heart of the great midwestern food-producing belt, has capitalized during many of its 75 years of continuous progress on the preference of the southern people for white cream style corn.

At the present time about 80 percent of the company's total corn pack is white cream style. Of this amount 75 per cent is sold and consumed in these nine states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Tennessee, and Texas. Moreover, the supply can't meet the demand. During the packing season, the previous day's run is often heading south by truck or rail by dusk.

S. B. "Sid" Cutright, vice-president and secretary and a member of the company since 1911, tells how his company developed and kept through the years such a large share of southern trade. "Back in the early days—it started around Memphis, I think—there would be an occasional cotton failure and the people naturally would be pressed for money. We'd take their notes for payment of canned goods and carry them until they were in a better position. You might say the business 'sort of grew'. Throughout all these years we gave good merchandise and even more important, good service. Our customers continually told us that they received due value for their money.

"In more recent years," he went on, "we started packing other products in addition to white and yellow cream style and whole kernel corn. Our aim was to provide a variety of products throughout the year and, of course, to keep our plant operating as much of the year as possible. Well, we were gratified to see our steady corn customers buy these products from the start."

The company was established in 1878 to pack corn. Today it owns and operates three plants. Dry beans and corn are packed at the main plant at Hoopeston. Tomatoes, tomato juice and puree, and asparagus are packed at the second Hoopeston plant. Peas and corn are packed at the Fowler, Indiana plant. In addition, the company has an arrangement whereby the Idaho Canning Co., Payette, Idaho, and the Hungerford Packing Co., Hungerford, Pa., pack kidney beans, pork and beans, and butter beans under the Joan of Arc and Pride of Illinois labels.

The Hoopeston firm is credited with several "firsts" in the industry. It is the oldest continuously operating canning factory in Illinois. It was the first

sizable company to start using the sanitary can for packing sweet corn. It was one of the first, if not the first, companies to fully recognize the need for controlling the delivery of raw products from the field to the factory. Before mechanization made such amazing inroads, 400 mules and 300 wagons were used to bring raw products to the plant at the proper time. Now these revamped mule barns make excellent warehouses.

Although the main Hoopeston plant is an old building, built before the development of the present-day era of streamlined conveying systems, the company has gradually built up a remarkable system for handling raw products, supplies, and canned products. It's a fetish of company president Louis Ratzesberger Jr. (see "How They Got There," page 102) to move objects with a minimum of cost, labor, and confusion. You see this system in full swing during the corn pack at Hoopeston.

Making final plans for their big 75th anniversary are these Illinois Canning officials, left to right: Chet Fisher, general plant superintendent; Louis Ratzesberger Jr., president; R. E. Snively, executive vice president (standing); and S. B. Cutright, vice-president and secretary.

Like mechanical pickers

About two-thirds of the annual production of 8,500 acres of sweet corn is picked with FMC corn pickers. A picker harvests an acre an hour, on the average, and does the work of five to 10 men. Several perennial problems were eliminated with the advent of the picker, according to Lou Ratzesberger. Men don't like to pick a field that is low in yield; they don't like to pick corn in the heat of the day; weedy fields are avoided by the help. The picker makes all this unnecessary. Early models picked up a lot of trash with the corn, but pickers now available probably furnish a higher percentage of corn from the same field than a jerker, he adds. He says the only disadvantage to the picker is that it can't operate in extremely wet fields.

Corn is brought to the plant in trucks or with tractors that each pulls three loaded trailers. Once in the yard, the loads are shunted to one of the four unloading pits. There, two tractors equipped with company-designed rakes quickly pull the ears from the vehicle into an underground conveyor system that takes the corn into the plant. These rakes eliminate another disagreeable job and in addition, handle corn faster than men can.

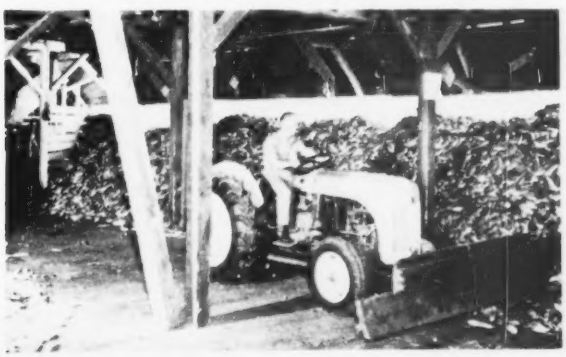
Inside the plant the corn is conveyed to an overhead line that services the 36 FMC double-unit huskers. Since the bulk of the day's requirements comes in during the early morning hours, surplus corn is dumped on a section of the factory floor that accomodates 225 tons. As the day progresses, this corn is pushed into underfloor conveyors with blade-equipped tractors and conveyed to the husking bins.

Plant capacity is large; as much as 1,100 tons of corn are processed in a normal day at Hoopeston.

As the corn is husked, the ears fall onto a rubber-belt conveyor and are taken to the two rotary corn washers. The fodder is hauled to a company-owned plot of land about a mile from town where it is stacked and fed as silage during the winter to beef animals. As the corn comes from the washers, it is dumped into a large, vertical bucket elevator made by the Link-Belt Co. and is elevated to the third floor. Here it passes onto two inspection and trimming belts where 110 women sort and trim the ears. These belts are each 120 feet long. They converge at the end of the room and empty into a chute through which the corn falls to the second-floor rotary washer. This washer empties onto an

(Continued on page 80)

Up to 225 tons of corn are stored here during early morning hours for use throughout day. As corn is needed in processing lines, tractor shoves it to under-floor conveyors which in turn takes it to huskers.



Daily sample cutting is attended by, left to right: Ed Briggs, head field man; Bob Thomas, quality control supervisor; and Chet Fisher. Quality control is thorough and all-inclusive at Illinois Canning Co.

Filled containers of chili sauce and prune juice converge and are cooled in one spray cooler. Note the divider that extends the length of the cooler. Asst. plant superintendent J. R. Butler looks on. Examples of compactness and efficiency are numerous at the Terre Haute plant.

Recipe Foods' "recipe" for rapid expansion at Terre Haute plant

Strict quality control, efficient manufacturing procedures, and aggressive merchandising methods have helped this fast-moving company to expand in the Mid-west

Louis R. "Lou" Markus (left) and William J. "Bill" Brune, co-managers of Recipe Foods' Terre Haute plant. Brune is midwestern sales manager for the entire Recipe organization. Markus, a chemical engineer, helped develop the famous chili sauce with the home-made flavor.

STRICT QUALITY CONTROL of both the raw and finished product, efficient manufacturing procedures, and aggressive merchandising methods have played an important part in the rapid expansion of the midwestern division of Recipe Foods, Inc. during the postwar years.

In 1946, the company, whose headquarters is in Baltimore, was operating a salad dressing manufacturing and filling line at Lafayette, Indiana. The same year the company moved to Terre Haute, less than 100 miles south, and started operating in more spacious quarters.

At present the Terre Haute plant operates four high-speed glass lines and in a single day has shipped out as much as 100 tons of chili sauce, prune juice, mayonnaise, salad dressing and related products including thousand island dressing, two kinds of french dressing, sandwich spread and tartar sauce.

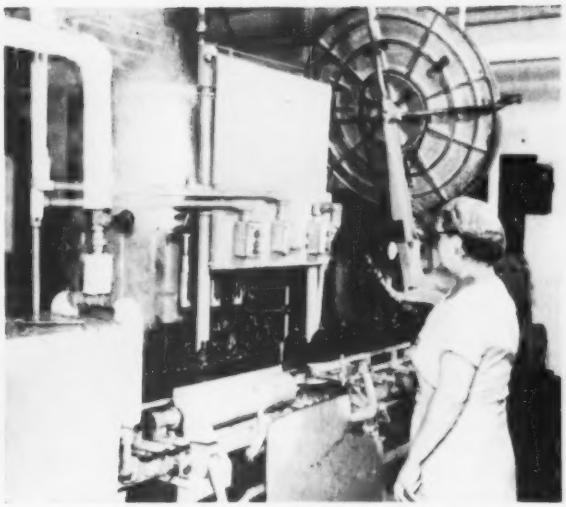
A major part of this expansion has been done the hard way, i.e., developing new company products and successfully merchandising them in a highly competitive industry. Here's a good example. Several years ago Theodore Marks, president of Recipe Foods and considered to be one of the keenest minds in the salad dressing business, tasted a delicious home-made chili sauce somewhere in his travels; a chili sauce that in his opinion had more zest and taste appeal than any available commercial product.

Marks went back to Baltimore, called in his technical staff, and it wasn't long until Recipe Foods came up with a really unique chili sauce that promised great possibilities. One of the men who contributed to its development was Louis R. Markus, a graduate chemical engineer.

Shortly thereafter, "Lou" Markus came to Terre Haute as plant manager and started producing this new chili sauce that had the remarkable "home-made" flavor. Under the company's premium Bennett label, the new product attained coast to coast distribution in less than two years and became one of the best sellers in the industry. Today, Bennett's chili sauce is also sold in 10 foreign countries.

Here's how it was introduced, according to William J. "Bill" Brune, co-manager of the Terre Haute operation and mid-western sales manager for the Recipe Foods organization. The first project called for small space advertisements in several national magazines, offering the chili sauce on a mail-order basis. These early suc-

Extraction of prune juice is conducted in the small tanks at right, then the juice is pumped to the large holding tanks. Another pump takes the juice direct to the fillers in the adjacent room.



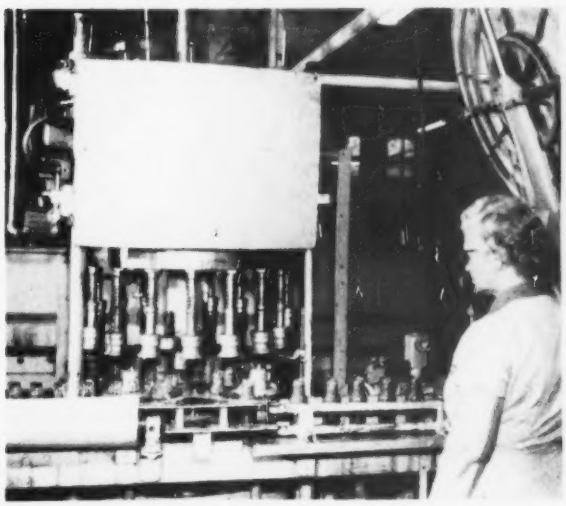
The prune juice filling line. Glass containers are preheated in box (left foreground) before they are filled. After filling, they pass through the White capper and washer into the cooler.

cesses encouraged the company to make a unique guarantee to chains that Bennett's would outsell all other brands of chili sauce combined, in a period of 90 days or all unsold Bennett's stock would be bought back at retail price. It was aggressive merchandising like this, spearheaded by a clever "twin-troductory" package of two bottles in a pick-up carton, that brought full national distribution in a few short years. A consistent schedule of national magazine advertising is now run to support the coast-to-coast distribution.

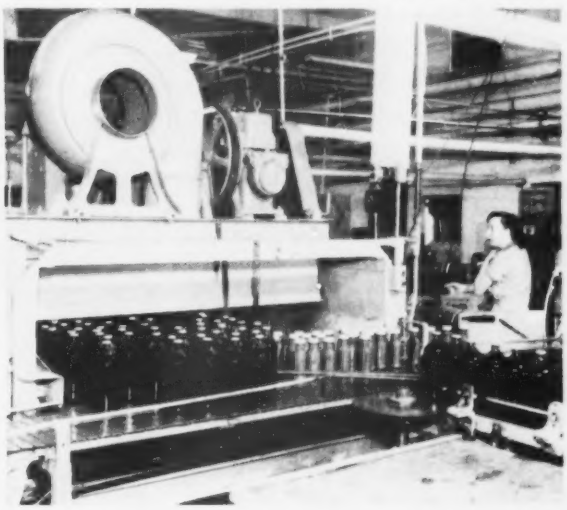
The story was similar for Recipe's prune juice in that a new product and label were created and placed on the market. First, the company experimented with the manufacture of prune juice and eventually decided on a pure juice containing only the pure prune flavor with no added flavors or preservatives. Recipe's technologists perfected an exclusive extraction process for extracting the juice from California dried prunes. Next the sales people conducted blindfold tests that showed that nine out of 10 participating homemakers preferred this prune juice over other similar products tested. A short line featuring "9 out of 10" was placed on the Bennett prune juice label and the facts also appeared in advertising that featured prune juice. Again, sales of this product quickly rose to gratifying heights.

The Terre Haute plant was designed and equipped for fast, continuous, and efficient operation. Preparation rooms and filling and capping equipment for each product are close together. This means that pumping operations are quicker and simpler and temperatures are easier to control than where distances are great. Finished products are palletized and carried by lift trucks along well-established routes to either the truck or rail loading platforms. Warehousing space is kept to a minimum because products are not held in storage for any length of time. May-

The chili sauce filling line. Preparation rooms are adjacent and filling lines are short, adding up to efficiency and ease of controlling temperatures. Electronic device controls filler-tank level.



Prune juice and chili sauce are discharged from the spray cooler. The products are conveyed to separate automatic labelers to the immediate right of the cooler. Note White Cap Co. push-off arm.



onnaise and salad dressing, for instance, are not manufactured until an order is on hand.

Raw materials and supplies, likewise, are handled by lift trucks. Lou Markus and assistant plant superintendent J. R. Butler have spent a lot of time working out an efficient system of materials handling.

Santa Clara Valley (Calif.) dried prunes are used exclusively for prune juice manufacture. "We consider these prunes the very best available," Markus says. They come in car loads, are blended by size, then undergo the extraction process in six stainless steel extraction tanks. The juice is then pumped to two larger stainless steel holding tanks where it is heated to the proper filling temperatures. From these tanks the juice is pumped to the Horix filler; the 24- or 32-ounce filled glass containers pass through the White capper and washer and then are conveyed into the spray cooler.

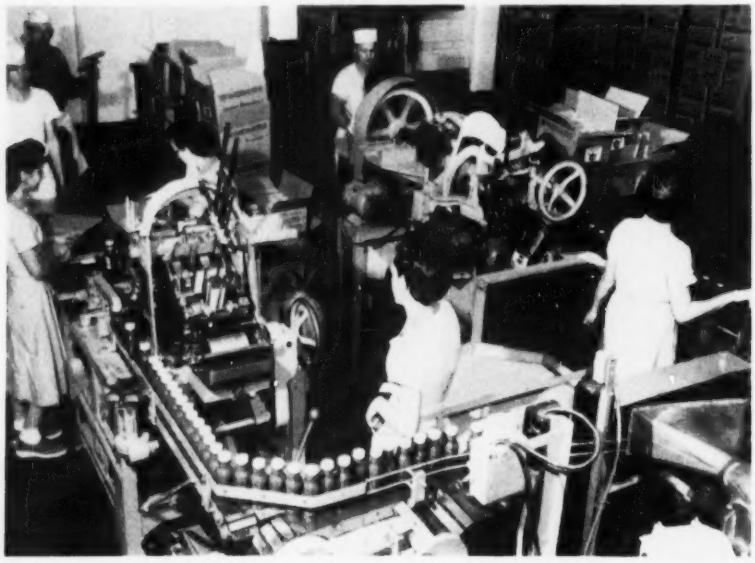
At the opposite end of the cooler a White push-off arm pushes the containers onto a conveyor that takes them through the World automatic rotary labeler.

Chili sauce is prepared in an adjacent room. Vegetables, pickle relish, sweet peppers, and spices are added to a specially processed tomato paste and all ingredients are mixed in premix tanks. From these tanks the sauce is pumped to three cookers where it is heated to 185° F. Then it is pumped to the Horix 18-pocket filler. G. Kapps, chief engineer at the Terre Haute plant, installed a Faratron electronic float control in the line between the cookers and filler. This mechanism automatically maintains the proper level in the filler. The sauce is filled into either eight- or 12-ounce glass containers, sealed by the White capper, and the containers are then conveyed through the same spray cooler that cools the prune juice. This cooler is divided in two lengthwise by a dividing panel so that chili sauce and prune juice can be cooled simultaneously. As the bottles are discharged from the cooler they pass through the World turret labeler where two labels are placed on each bottle of chili sauce. Containers for prune juice and chili sauce are supplied by Owens-Illinois Glass Co. and Anchor Hocking Glass Corp.

Miss Martha J. Hendricks, quality control supervisor at the Terre Haute plant, measures the acidity in a sample of salad dressing. Recipe's quality control is systematic and thorough.

The mayonnaise and salad dressing products preparation and filling room is located in a pleasant and well-lighted area on the west side of the plant. Conveniently located at the rear of the room is a sizable cold storage compartment where eggs and other perishable ingredients are stored. Each of the two lines is equipped with a Geyer filler and a Capem four-spindle capper that can handle either lug caps or screw caps.

Chili sauce (left) and prune juice (right) are labeled at 70 per minute in these two automatic labelers. All products, both raw and finished, are handled on pallets and lift trucks.



Multiple filling

One of the fillers handles pints and quarts automatically and the other handles eight-ounce containers. Gallon containers and five-gallon kits can be filled semi-automatically on either machine. An ingenious pumping arrangement, all stainless steel, permits the interchanging of all products on either filler. If necessary, eight-ounce, pints, and quarts can be packed on either line. Glass containers for these two lines are furnished by Owens-Illinois, Anchor Hocking and Hazel-Atlas Glass Co. Caps are furnished by Anchor Hocking and Crown Cork and Seal Co.

In the manufacture of mayonnaise, eggs, vinegar and spices are placed in the four stainless steel premix tanks. Vegetable oil is automatically

(Continued on page 88)

Operations Analysis—

A valuable management tool for canners

What effect has a new practice, new policy, or executive decision on your business operations? Here is a new but fundamental and important approach to increased business efficiency by Dr. Stier of National Canners Association

HOWARD L. "JACK" STIER
Director of Statistics
National Canners Association

THE TERM OPERATIONS ANALYSIS as used in this article refers literally to the analysis of business operations. During and since World War II there has been an increasing discussion and use of a technique commonly referred to as "Operations Research." Although "Operations Research" has many valuable contributions that it can make to the improvement in the efficiency of management in the canning industry, its techniques are of a more complex and advanced nature than those which I am going to describe under the heading of Operations Analysis.

In the application of any new technique it is important that the user start with simple and fundamental approaches so that the principles and specific applications to the industry or operation concerned can be developed and visualized. This is, I believe, especially true in the application to the canning industry of the statistical control tools that are now available. Canners who have not used them before should start with the simplest and most basic applications to their particular operation. Many of these applications can actually be made by an operating official or management personnel now in the canning company. Fortunately, many such simple techniques prove to be almost as effective as those which require more highly trained personnel. It is this simplified aspect of the problem to which I will devote most of my discussion in this article.

Before passing entirely from "Operations Research," I would like to stress an important point to those canners who have made some progress in the past to the application of the simpler techniques of Operations Analysis and have moved into the field of "Operations Research." To be most effectively used, "Operations Research" techniques require the services of highly trained mathematical statisticians and frequently other scientific personnel. Even if most canning companies could afford to hire a full-time mathematician to plan and conduct "Operations Research" for them, there would not be enough trained mathematicians to meet such a need.

Only three steps

Now back to what I have called Operations Analysis. As I use this term, it involves the use of simple statistical and graphic techniques. Essentially there are only three steps in the process: (1) get the figures; (2) chart them; and (3) analyze and interpret. Very frequently many important relationships and trends can be quickly seen when statistical data are put in chart form that are not evident even after study when the same data are in tabular form. The procedure of simply making a chart makes many facts and relationships stand out. Once the technique of graphic analysis is mastered, it becomes a potent tool in the hands of the plant manager or company executive. Usually a simple, well-drafted chart bristles with questions. A key point to remember in charting is that every chart should be as simple as possible. Each chart should be so designed that it makes one point and one point only. Don't make the mistake of cluttering your charts with a number of lines or figures which detract from its effectiveness. Sometimes professional statisticians are prone to do this. As a result, much of the effectiveness of charts and graphs is lost when presented to management.

The analysis and interpretation step will come logically after charts are prepared. The answers to certain of the relationships and trends that graphic analysis will reveal will be known, but many times it will be necessary to go behind the figures and find the reasons. Without graphic analysis many such relationships may never be realized nor the key questions raised.

Specialized technique

I would like to make clear at this point that Operations Analysis, as I am using it here, actually constitutes a specialized technique in the management control of the canning business. The ordinary type of reports and statistical data that is prepared for management control purposes constitutes what I think of as "status reports." Operations Analysis, on the other hand, refers to the use of statistical and graphic analysis techniques as a special study activity which augments the routine management control procedures. It provides a basis for telling the user where he is going. That is, it has prediction capabilities and is not concerned necessarily directly with where we have been. Operations Analysis when effectively used tells the operating executive and the administrative official how to improve existing techniques while many management control procedures simply tell him whether the present operation was more or less efficient this week than it was a week ago or a year ago. Operations Analysis can tell the user what the effect will be of a new practice, a new policy, or of an executive

decision which is being contemplated. Operations Analysis is therefore an important adjunct to the usual management control technique of preparing periodic status reports that measure *changes* in performance and efficiency. By means of Operations Analysis management control becomes much more meaningful and effective.

Immediately prior to World War II there were a few industry applications of the more advanced techniques where mathematical models were formulated and used to interpret and analyze operations of industrial concerns. During World War II excellent opportunities were found to ascertain the real values that could be obtained from the use of such techniques. These procedures were largely developed by *teams* of scientists. Mathematicians, astronomers, physicists, biologists, all teamed up to provide a scientific approach to the problem of mathematical analysis of operations and to predict future effects. Throughout the War the continual advances that were made in the application of this new tool made it possible to greatly improve the effectiveness of military operations of all kinds.

War-born weapon

The techniques were used at all levels of military operations, those involving materiel as well as in tactical and strategic operations. By the end of the War it was evident that this tool was a very powerful weapon. Many of the persons who participated in its application during the War returned to industry armed with this new knowledge and with a more accurate understanding of its potential value and application to industry. By using mathematical equations and probabilities it was found that the answers were not only more accurate but frequently would be obtained quicker and at less cost than by previously used "survey methods."

An even more advanced application is the application of the laws of probability to determine the probable outcome of certain changes in processes or the probable effect of certain management decisions or policies. This application is especially valuable in decisions concerning advertising, sales, product quality, etc. However, at this time there are probably relatively few canning firms that can properly utilize these more advanced techniques, especially because of the highly trained personnel that are required to perform the mathematical computations involved. Rather, I believe that the most important current application by the canning industry can be the use of the more simplified procedures of statistical and graphic analyses of operations. Many of these techniques can be used without the necessity of having highly trained mathematicians and have the further advantage of being a type of presentation that can be rather readily understood and interpreted by most management people although they are untrained in the field of mathematics.

Should know company picture

Here are some important points concerning the approach to Operations Analysis and the type of person needed to conduct Operations Analysis. First of all, the person who performs Operations Analysis in any company should have the "whole company picture." He should be able to place in the proper perspective the various functions and operations of the organization. He needs to have familiarity with, but at the same time, objectivity about each operation in the organization. Obviously such a person should have some statistical abilities and talents. He should like to work with figures and be able to see relationships and to know how to obtain important data with minimum effort. He does not necessarily have to be a highly trained statistician or mathematician in order to be effective.

Dr. W. E. Deming, well-known mathematical statistician and proponent of the use and application of statistical methods in industry, recently stated that "failure to use statistical knowledge and statistical techniques constituted one of the greatest present-day wastes of a natural resource in the United States." He pointed out that frequently there are individuals in industrial organizations who have a natural talent in the use and application of statistical procedures and if given an opportunity could be extremely valuable to company management in increasing the effectiveness and general efficiency of operations. He went on to say, however, that frequently such persons are shunted aside and placed in some remote part of the organization or not utilized at all. In nearly every company there is usually one or more such persons. It is this kind of person when uncovered who can be of inestimable value to management in giving facts and figures they need for effective management control and in establishing Operations Analysis procedures for use by company operating and administrative officials.

As an example of the application of some of these techniques, I have prepared charts showing the trend of important financial ratios for the fruit and vegetable canning industry during the past 20 years. Merely the comparison of an individual canning firm's financial ratios with these industry values will immediately tell management if their particular canning company is above or below the industry average. This one comparison can be the basis for further Operations Analysis to ascertain causes for the relative position of the company.

These charts are shown on the following page.

The lines in these charts represent median values for the industry. This means that one-half of the companies in the industry showed values above those charted and the other half fell below. Fourteen such financial ratios are published each year by Dun & Bradstreet for manufacturing, wholesale, and retail firms. The financial ratios may be divided into four general groups: net profit ratios; capital ratios; inventory ratios; and sales ratios. There are three or four ratios usually calculated in each of these groups. I have selected one in each group to serve as an illustration of the use of the particular type.

Financial guideposts valuable

The use of these financial guideposts by the canning industry is probably one of the best places for a canner to start in the use of Operations Analysis and Management Control procedures. More and more industrial firms are adopting the practice of using financial controls as a means of directing operations. In the application of what is now widely referred to as the DuPont investment theory, the management of a company furnishes the most capital to the divisions of the organization which show the greatest rate of return on investment. The American Management Association has published an excellent description of this technique in their financial management series booklet No. 94, "How the DuPont Organization Appraises Its Performance."

In addition to comparison of the fruit and vegetable canning industry financial ratios with individual company ratios, much can be learned by an analysis of the *trends* of the industry and their correlation with various periods of financial stress and strain. The period covered by the data which I have charted in the accompanying charts includes the depression years of 1931 to 1933, the years 1938 and 1939 which were

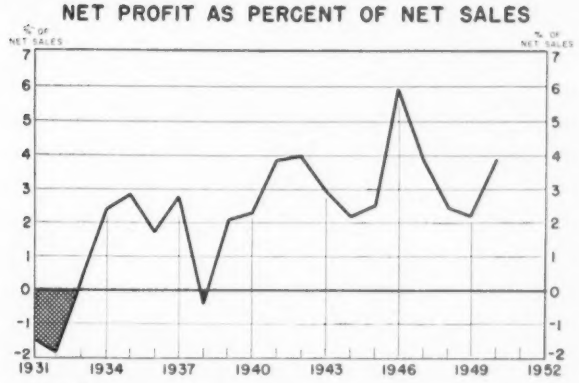


Chart No. 1

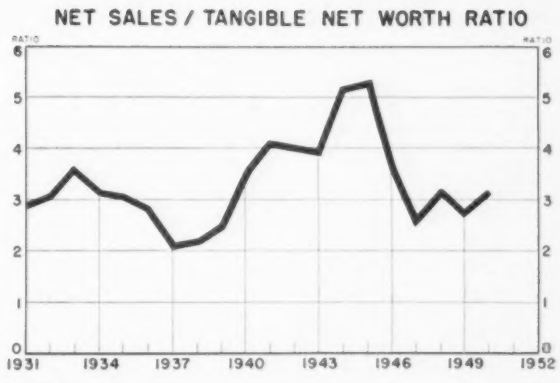


Chart No. 2

These charts pertain to fruit and vegetable canners, and were prepared by the Division of Statistics, National Canners Association, November 1952. Source: Dun and Bradstreet Incorporated.

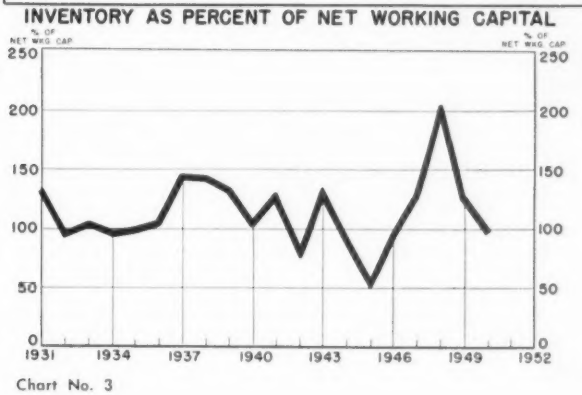


Chart No. 3

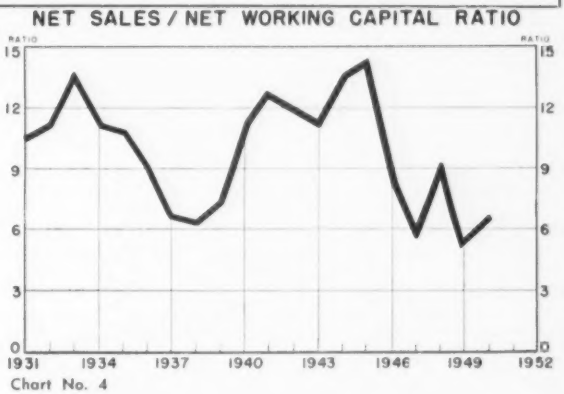


Chart No. 4

difficult years for many fruit and vegetable canners, the war period, and five post-war years.

Profit ratios

Chart No. 1 shows the trend in net profits as a percentage of net sales. Financial analysts usually agree that if the net profits of a business for any one year are considerably greater than those of all competitors, then an analysis should be made of accounting methods, general policies, depreciation charges, use of hidden reserves, and probable effects of an abnormal prosperity period.

In 1937, Roy A. Foulke[1], vice president of Dun and Bradstreet, made these significant statements with respect to net profit:

> "It is not the profit or loss which is the primary interest; it is the understandable basis of that profit or loss that brings the result—age old cause and effect.
>
> "So, although net profits are the economic end of the business enterprise, a business cannot be operated solely for the maximum of immediate profits. The proportions of its balance sheet, its liabilities, receivables, and merchandise must simultaneously be kept in healthy relationship to the net working capital and the tangible net worth.
>
> "And if net profits are unusually large, the basis of those profits should be carefully analyzed to ascertain if the result came from economic factors of a particularly favorable character which might be all too temporary, or from efficient operations and unusually capable conscientious direction."

In Chart No. 1, I selected net profit as a percentage of net worth because that is the measure that is commonly used by the business official. Other profit ratios that are available are the net profit expressed as tangible net worth and as a percent of net working capital. Stockholders, of course, are primarily interested in net profits as related to tangible net worth.

Capital ratios

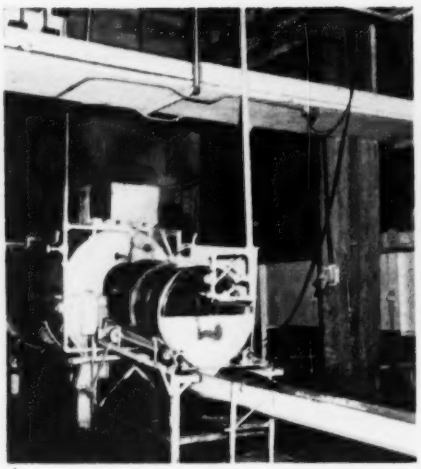
I have selected the relationship of fixed assets to tangible net worth as illustrating one of the capital ratios. The generally accepted rule that is followed in the use of this ratio is to maintain the depreciated value of fixed assets at two-thirds or less of the tangible net worth for companies that have a tangible net worth between $50,000 and $250,000. Likewise, current debt in most business firms is considered out of hand when it becomes greater than two-thirds of the tangible net worth for the $50,000 to $250,000 firms. For firms that have a net investment greater than $250,000, the general rule is that the fixed assets should not total more than three-fourths of the tangible net worth.

In chart No. 2 it can be seen that the median value of fixed assets as a percent of tangible net worth for fruit and vegetable canners, was close to the 75 percent line each year during the period 1931 through 1935. This means that for the industry as a whole, one-half of the fruit and vegetable canners had fixed assets that

(Continued on page 94)

[1]From "Behind the Scenes of Business," 221 p. Dun & Bradstreet, Inc. first published in 1935; revised editions in 1936 and 1937.

Vines are fed into Chisholm-Ryder viners; shelled limas emerge. Opposite is conveyor that carries boxes of shelled beans to cleaning and loading station.



The lima beans are blanched in a Sprague-Sells blancher. They then go directly into a Monitor washer before they are flumed on to the Lewis quality graders.

By the time the lima beans have reached the inspection belt, they have been brought up to a high quality level by mechanical means alone.

A retired baker turned freezer and now packs 3¼ million pounds of lima beans a year

Patterson Frozen Foods, Inc. uses ingenious methods for smooth plant operations that turn out high quality fruits and vegetables

RUTH TEISER
and
CATHERINE HARROUN

IT'S A LONG WAY from a retail bakery to a 12-million-pound-a-year frozen food plant, but Mario Ielmini of Patterson, Calif., has made the journey successfully in the past seven years. In 1946, a year notably poor for the frozen food industry, he established Patterson Frozen Foods, Inc., a conservatively financed but progressively operated business which has achieved an outstanding reputation among Western freezers, growers and buyers alike. A practical demonstration of this reputation is the fact that most of his pack is contracted for a year in advance and at premium prices.

The story behind Patterson Frozen Foods is one which Americans like to think of as typical. Mario Ielmini was born in Italy and at 16 came to California to make his fortune. He followed a longstanding family tradition by becoming a baker. When a bakery owner in the little San Joaquin Valley town of Patterson advertised for an apprentice, young Mario forsook San Francisco to take the job. Two years later he bought out his employer and sent for his brother Alphonso to come and take a share in the business.

Twenty-two years later, when they decided to retire, the brothers had made a comfortable fortune. They were among the leading citizens of the prospering town, and Mario was and is still a member of the board of directors of the Commercial Bank of Patterson, a sparkplug of the Chamber of Commerce, a key member of the city planning board, and an all-around civic leader.

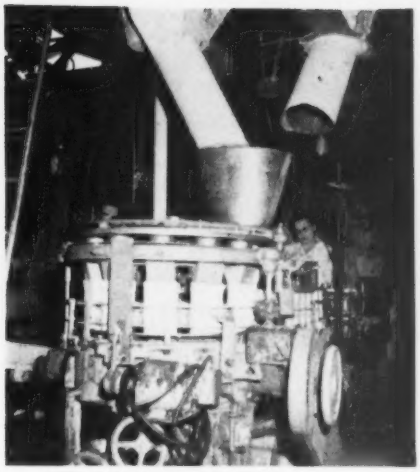
Froze fruit in bakery

That, however, was not to be the end of the story. In the bakery the Ielminis had frozen small amounts of locally grown fruit for their own use. As a retired baker, Mario found fishing and other similar activities did not satisfy him; he kept thinking about frozen fruit. Finally one day he hung up his fishing hat and went to San Francisco for advice about investing his time and money in establishing a small frozen food plant there in Patterson. It was 1946 and he received no encouragement.

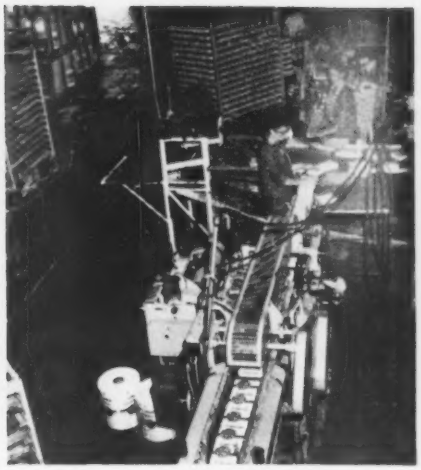
"I told him to forget it and go on being a retired baker," a frozen food industry leader recalls today. "I hated to see him lose his money. I certainly was wrong."

So Patterson Frozen Foods, Inc., was established. Mario became president and business manager; Alphonso took charge of field operations; and a few months later Fred Voit, university-trained chemical engineer and food technologist, became plant superintendent. It is a combination which has worked out exceptionally well. Where in the beginning they packed a carload a week when they were running well, today they turn out one or two carloads a day, eight to 10 a week. The original 80′ x 130′ processing and cold storage plant has grown to 450′ x 130′, and according to Voit, "It's too small again."

Patterson Frozen Foods packs a variety of vegetables and fruits, mainly locally grown in their own



The Marathon Marapak filler requires only one operator. It automatically sets up, fills and closes cartons and sends them on to wrapping machines by conveyor belt.



Two continuous-flow Battle Creek wrapping machines handle 300 consumer-size cartons a minute. Cartons are then placed on trays in metal racks ready for freezing tunnel.

Loaded racks are taken into freezing tunnel compartments separated from tunnel corridors by overhead doors. At left is rack of lima beans being tray frozen.

fertile farming area, for nationally distributed private brands and for their house brand, Fresh-Pact. Chief items are peas, broccoli, spinach, brussel sprouts, green beans, mixed vegetables, apricots, strawberries, and, largest of all, lima beans. The entire lima bean pack, both baby and Fordhook, runs to around three and a quarter million pounds a year. For two to three months a year the plant devotes its entire facilities to limas.

Control starts in field

The Ielminis' control begins in the field. They contract for crops, usually supply seed, and oversee all growing and harvesting operations. Lima bean harvesting consists of cutting the vines off at the ground, loading them into trucks and carrying them to a battery of 18 viners owned and operated by Patterson Frozen Foods. The viners are all Chisholm-Ryder. Three pair of them this year were experimentally equipped with Key Equipment Co. (Milton, Ore.) Chinaman feed regulators and Key's electrically operated feeding forks. These were found so satisfactory that the rest of the viners will be similarly equipped. Shelled limas fall into lug boxes which are carried manually to a chain belt that conveys them to a Clipper cleaner. They then go into clean boxes which are palletized and trucked to the plant where they go immediately to the preparation line. Rarely do more than two or three hours elapse between the field and the line.

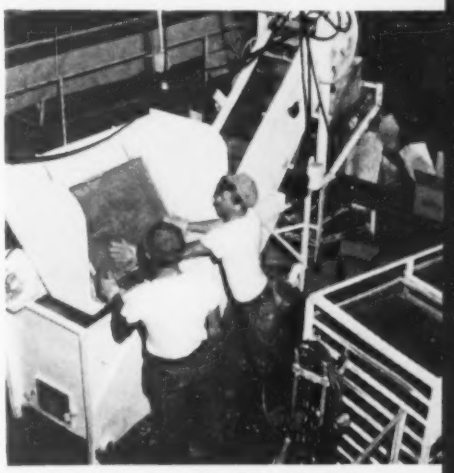
Pallets are moved within the plant by hand-operated electric Yale worksaver fork-lift trucks. Pallet-loads of limas are deposited next to the hopper at the beginning of the line and boxes are emptied manually. A goose-neck elevator carries the product up to be flumed to a Monitor washer. Then it is carried to a Lewis quality grader where foreign matter and "dries" are removed by flotation. Salt is removed by a Sprague-Sells rod reel washer, and the product is carried through a Sprague-Sells rotary blancher, then cooled in a Monitor revolving washer. From there it goes up to a second Lewis quality grader equipped with an automatic salt brine solution density controller. Washed once more, the lima beans are flumed to the inspection line.

13 women inspect

The 13 women who inspect the beans as they are carried down the 45 feet on a 24-inch-wide belt have a relatively easy job, for by the time the product reaches them it contains few imperfects. By ingenious adaptation and arrangement of standard equipment, Voit has made up a line which, by mechanical means alone, turns out a remarkably high grade product. His inventive approach to all problems has created a well equipped but unconventional plant characterized by extreme flexibility and high quality of its output.

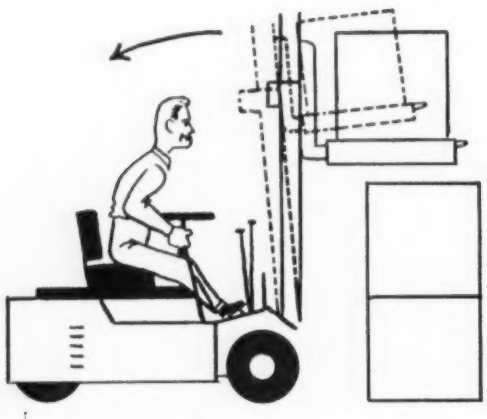
Typical examples of his methods are the lima bean "break-up line," the mixed vegetables mixer, and the box casing rack. Limas for mixed vegetables are tray-frozen, then fed by the tray-full into a rebuilt Monitor

(Continued on page 94)



Typical of ingenuity visible throughout Patterson plant is this line for breaking up tray frozen limas and filling them into cases for use in mixed vegetable pack.

Mario Ielmini (left) president and business manager of Patterson Frozen Foods, and Fred Voit, plant superintendent.



Before raising a load tilt uprights back . . .

. . . When releasing load tilt uprights to vertical and back out of pallet

How to operate a lift truck

Pointers that will help beginners become experienced operators: and experienced operators to rate their ability as drivers.

Whether you already have or are considering purchasing lift-truck equipment, the instructions printed here, courtesy of the Hyster Co., will help you and your men become better operators. We suggest this article be clipped for ready reference.

STARTING

After starting a cold engine, close choke button as soon as possible. Excessive choking will cause unburned gasoline to leak past the pistons and dilute the lubricating oil.

In cold weather always allow engine oil and oil in hydraulic system to warm up and circulate freely before operation.

SHIFTING

Do not drive with your foot on the clutch. This causes loss of tensin on clutch springs, allows clutch to slip, causing excess wear and also is harmful to the throw-out bearing.

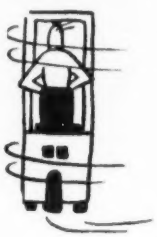
Learn to keep all shifting to a minimum; eliminate any unnecessary manipulations.

Always start in low gear. A smooth, gradual pickup is a credit to an operator. Careful, planned shifting requires less effort, saves time, minimizes breakdowns.

For low speed, accelerate engine slightly and engage clutch slowly so as to neither stall the engine or jerk the truck. As engine gains speed, declutch and move control lever through neutral to "high" position.

Shift to a lower gear before the engine begins to labor, as in pulling up an incline. Always shift to a lower gear before descending an incline that will require excessive use of the brakes. To make this shift, release clutch and shift to neutral; then reengage clutch and speed up engine sufficiently to permit shifting to a lower gear without clashing; then declutch quickly and shift to the lower gear.

To reverse the direction of travel, declutch, bring the truck to a complete stop and move control levers to proper position. Shift the transmission lever to correct position for desired direction of travel and reengage the clutch.

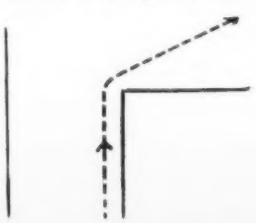


STEERING

Turns should be made smoothly and gradually, free and easy. Spotting loads requires extreme accuracy and sudden turns may cause loss of control and spilling the load.

Remember that a loaded truck usually steers easier than an empty one. Some heavy-duty trucks have hydraulic steering, but the more commonly-used sizes steer harder unloaded in spite of the high steering ratio. Lift trucks can be steered from the rear wheels, thus the truck can be cramped much easier than conventional trucks.

Beginners usually try to turn



"You Must Have Dinner At My House...
We're Having TRIPLE Succotash!"

Crown Cans used by Jenkins Brothers, Inc. Growers and Packers of Quality Vegetables, Frederick, Md.

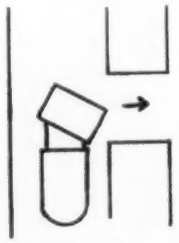
She didn't say so, but it's JENKINS BRAND TRIPLE SUCCOTASH, a superb blending of tomatoes, sweet corn, and fresh green lima beans. Known primarily as a southern dish, it makes a fine mixture for soups, can also be used as a salad or tomato stew.

Products that are "something special" naturally *belong* in Crown Cans because the fine quality of these cans afford superior protection to flavor and quality. Crown's expert technical service and friendly way of doing business are highly important to canners, too. Why don't *you* get in touch with Crown?

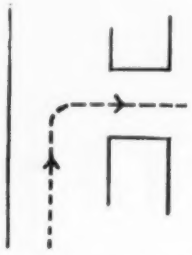
CROWN CAN
Division of
CROWN CORK & SEAL COMPANY
One of America's Largest Can Manufacturers

PHILADELPHIA, CHICAGO, ORLANDO, NEW YORK, BALTIMORE, ST. LOUIS, BOSTON

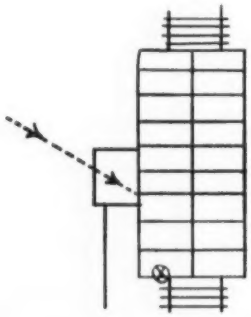
too sharply. When turning sharp corners, start from the inside corner rather than from the middle of the aisle.



In exceptionally narrow aisles, it is usually permissible to carry the load at an angle toward the direction you wish to swing in order to shorten the turning radius.



When turning across aisles, start the turn as close to the opposite stockpile as tail-swing will allow.



If edge of bridgeplate forms a bump or obstacle, enter freight car at an angle. Always remember that a lift truck is steered by the rear wheels and that you must allow for an exaggerated tail swing.

Lift trucks have a peculiarity known as "free turning." That is, once the turn is started, the truck has a tendency to turn sharper and sharper in a smaller and smaller circle. You must counteract this by turning the steering wheel the other way to slow down the sharpness of the turn. When traveling in reverse, the opposite holds true.

TRAVELING

Know the underclearance of your truck and the surface upon which you are traveling at all times.

To transport a load, tilt the uprights as far back as the nature of the load will permit and raise load only high enough to clear obstructions or to give a clear view.

When traveling unloaded, always keep the forks in a low position. Four inches off the ground is the usual practice. When operating a fork truck on an incline, back down steep ones.

Unusually large or heavy loads can be transported by two lift trucks operating together — one operating forward and the other backward in the same direction. This should only be attempted by experienced operators.

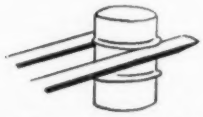
High lift trucks should seldom be used to carry loads at greater distance than 300 feet. Tractors and trailers or platform trucks are designed for horizontal materials handling.

LOADING

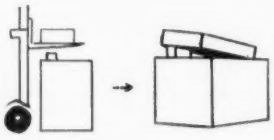
Never, under any circumstances, attempt to operate the lift truck with a load that raises enough weight from the rear wheels to tip the truck or make steering uncertain. Any load that will do this is a dangerous overload.

Forks should be spaced in the pallet so that they are at an equal distance from the center stringers.

When picking up round objects, first tile the uprights so that the forks slide along the floor under the object to be lifted.



Drums, barrels and similar objects which have lips or ridges can be picked up by closing the forks against them before lifting if truck is equipped with "load grab."



To unload a large case or similar object without a pallet, first drive into position for stacking; then lower the load onto a thick piece of dunnage; next, withdraw the forks so that only the tips of the forks hold up the end of the load; withdraw the block, tilt uprights forward and back away.

Get under the loads squarely with both forks; using only one fork may twist, strain or permanently damage the truck.

POSITIONING

Learn to judge instantly whether you should back into a tight place or head into it. Check the position of the drive wheels as a guide for positioning pallet.

When lowering pallets apply the "down" control until pallet is on floor, then tilt uprights to vertical position so that the forks can be backed out. Practice raising the load as the truck is nearing the stack while coasting into position.

(Continued on page 92)

We can learn from bankrupt Micawber

"MY advice, Copperfield, you know. Annual income twenty pounds, annual expenditure nineteen-nineteen-six, result happiness. Annual income twenty pounds, annual expenditure twenty-ought-six, result misery. The blossom is blighted, the leaf is withered—in short you are forever floored. As I am!"

This is probably the most famous financial counsel in all English literature, offered a hundred years ago by Charles Dickens' character the bankrupt Micawber to the hero David Copperfield. As advice it is just as good in 1953 as it was in 1849, and just as sound for a nation as for an individual.

In 17 of the last 20 years, Uncle Sam has followed Micawber's practice, not his advice. Our national balance sheet has been, figuratively, "annual income twenty pounds, annual expenditure twenty-ought-six". Ahead of us as a nation, if we continue this irresponsible policy, is Micawber's dire predicament, "blossom blighted, leaf withered—forever floored".

There is no sane reason why the world's richest nation should continue to live the financial life of a profligate bankrupt. It is time now to set our house in order. The program called for is simple: (1) Eliminate waste and extravagance in government spending; (2) Balance the Federal budget; (3) Control the national debt and reduce taxes.

By such positive action we can protect future happiness—and prevent misery—for ourselves, our children and our children's children.

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Quality Control Clinic

DR. WILBUR A. GOULD
Ohio State University
QUALITY CONTROL EDITOR

"Quality makes the product what it is"

Here's where we stand on color grading of fruits & vegetables

Gould rounds up available information on color grading and says the long pull is still ahead, and that success depends on concerted efforts of the entire industry

MEASUREMENT OF COLOR in fresh and processed fruits and vegetables and other foods, and the control of color during the processing of foods is without doubt the most important single quality factor affecting grower-processor relationships and consumer acceptance of processed products. There has been considerable emphasis recently on methods of color measurements and reports dealing with studies on color loss during the processing of fruits and vegetables. However, there are still many unsolved problems. Some of these are: (1) how to sample the loads of raw produce and the lots of processed products for color measurement; (2) how to prepare the sample for color measurement; (3) what instrument to use when determining the color of the raw or the processed product; and (4) how to interpret the color data obtained when using one of the many new instruments.

Before discussing these four points, we must define what is meant by the term "color." Color has been defined by several authorities.

To the grower, the processor, the consumer, and the quality control technologist, however, color is what we see when we look at a fruit or vegetable or other food product. Munsell (8) states, "every object is seen only as a color or combination of colors and every contour and detail of every object is seen only as color or colors." However, in order to see and consistently evaluate the color of a raw product, a product during processing, or the finished product, the quality control technologist must always see the sample under the same lighting condition. (See Food Packer, Artificial Light for Visual Color Evaluation of Fruits, Vegetables. November 1952).

If more emphasis had been given to this phase of color measurement of both the raw and the processed products and to the color control during the processing of the products, a discussion of the above four points might not be necessary at this time. However, I am the first to agree that all quality attributes of fruits and vegetables should be determined in an objective manner, if objective instruments and techniques are available. In the case of color determinations, there are several techniques and several instruments being used today; however, only one instrument, the Agtron spectrophotometer, has been adopted officially, and only in California. This instrument along with several others and their use will be discussed below.

Sampling

The problem of adequately sampling the loads of fruits and vegetables for raw product quality measurements is one of the first problems confronting the quality control technologist. He must decide on two points: (1) how many samples to draw from a given load or lot of produce; and (2) where to draw the samples from within the load or lot. This problem is peculiar to all factors of quality, but it is most important with crops like tomatoes since the raw grade is determined in great part by the evaluation of the sample for color. Thus, a true sample is imperative for a fair and just grade.

The U. S. Department of Agriculture's sampling rate is considered satisfactory. However, a few suggestions for improvement have been voiced by certain groups. One suggestion is to draw the sample in accordance with the figure obtained from the square root of 1/10 of the number of hampers, lugs, or boxes in the load. For example:

No. of containers in the load	No. of containers to draw for samples
10	1
50	2
100	3
500	7
1000	10

The above, no doubt, has certain limitations and would be dependent upon several factors. Most important are the size of the container to the overall load and the importance to be placed on the particular attribute under consideration. In case of the rejection of the load, based on this proposed sampling rate, the quality control technologist should draw twice the number of the above samples.

Another approach to the sampling problem is the use of statistical sampling tables. In a recent publication by the U. S. Government Printing Office in Washington, D. C. (Mil std 105 A), "Sampling Procedures for Inspection of Attributes," specific tables are given, in which exact sampling rates are presented. The use of these and other tables may help the quality control technologist to do a better job of sampling the loads of raw produce, or in the in-plant quality control checking, or in sampling the finished product for inspection purposes.

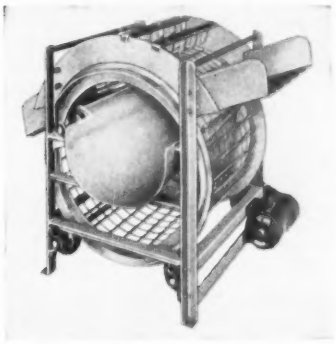
It should be pointed out that the processor is not interested in the measurement of the color of one par-

ROBINS BOOTH PROMISES TO BE TOP INTEREST POINT AT THE CHICAGO CANNERAMA

Booth No. 5 to feature premiere showing of 4 machines that will give you new highs in performance

Mr. Robert (Bob) A. Sindall, Jr., President of A. K. Robins & Co., Inc., says, "This year the House of Robins is prepared to show the trade some of the results of our long range thinking, planning and designing. In the years to come, food processors are going to be hard-pressed to keep up with demand unless they have, in daily operation, the most modern, time-saving, efficient equipment available. Since 1855, A. K. Robins & Co., Inc. has earned a reputation for being AHEAD of the need. That's a bigger job than ever these days and the machines we'll be exhibiting show that we've been thinking about the future of the food processing industry."

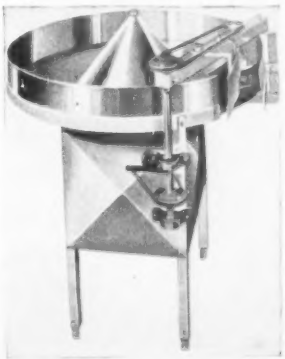
Representatives of the Production, Engineering and Sales Departments of Robins will be in Booth No. 5. These representatives will demonstrate the new Robins machines and will explain fully the many unique features of design that contribute to greater plant efficiency and economy.



NEW *Robins* ROLL-OVER TOMATO GRADER

Revolutionary in design, this new grader offers many advantages over machines now in use. Most important advantages are—95% grading; no crushing of fruit; takes only 7½ sq. ft. of floor space; can be converted into conveyor between scalder and washer in only 15 seconds; only ⅓ H. P. motor required. (Patents Applied For.)

NEW *Robins* PICKLE SORTER

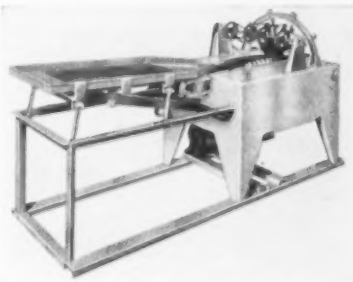


NEW . . . but proved in thorough field tests . . . the Robins Pickle Sorter is designed to feed pickles to the Urschel Model 0 Pickle Slicer. The machine operates on the principle of centrifugal motion which sorts pickles and feeds them automatically to the slicer. (Patents Pending.)

NEW HARRISON BREADING MACHINE

This machine is the first completely automatic equipment of its kind. Two attendants now can do the work of twenty operators breading by hand. Ideal and practical for breading oysters, shrimp, scallops, soft-shell crabs, all fish fillets, disjointed chicken, veal cutlets, pork chops, veal chops, lamb chops . . . preparatory to cooking and/or freezing. Eliminates waste of breading and batter, breading is more uniform. Entire operation becomes more practical, dependable and sanitary. (Patents Applied For.)

Robins PEACH SLICER



Silent and vibrationless in operation . . . one 1 H. P. motor drives complete unit. Because of the method employed in driving the 8" stainless steel circular blades, the usable surface of the blades is greater than machines using blades two to three times larger in diameter. Can be equipped with either three, four, five, or six blades.

See You in Chicago . . . BOOTH No. 5

A.K.Robins AND COMPANY, INC.

Manufacturers of Food Processing Machinery Since 1855

713-729 East Lombard St., Baltimore 2, Md.

Fig. 1—Dr. Gould uses the Hunter Color and Color Difference Meter. Color can be measured on either whole fruit, cut surface, or juice that is extracted. Unknown samples are compared with color measurement units (predetermined) furnished by the National Bureau of Standards.

Fig. 2—The Agtron spectrophotometer. In tomatoes, it compares the greenness to redness, or more simply, a tomato is red because it isn't green. Manufacturer states that for 1953, 120 Agtron units will be used, mostly in California, where Agtron's use is now official.

ticular fruit or vegetable as such but rather in the overall color rating of the entire lot. Proper sampling of the load or lot and true evaluation of the color of the product will give a true evaluation of the products' worth to the processor.

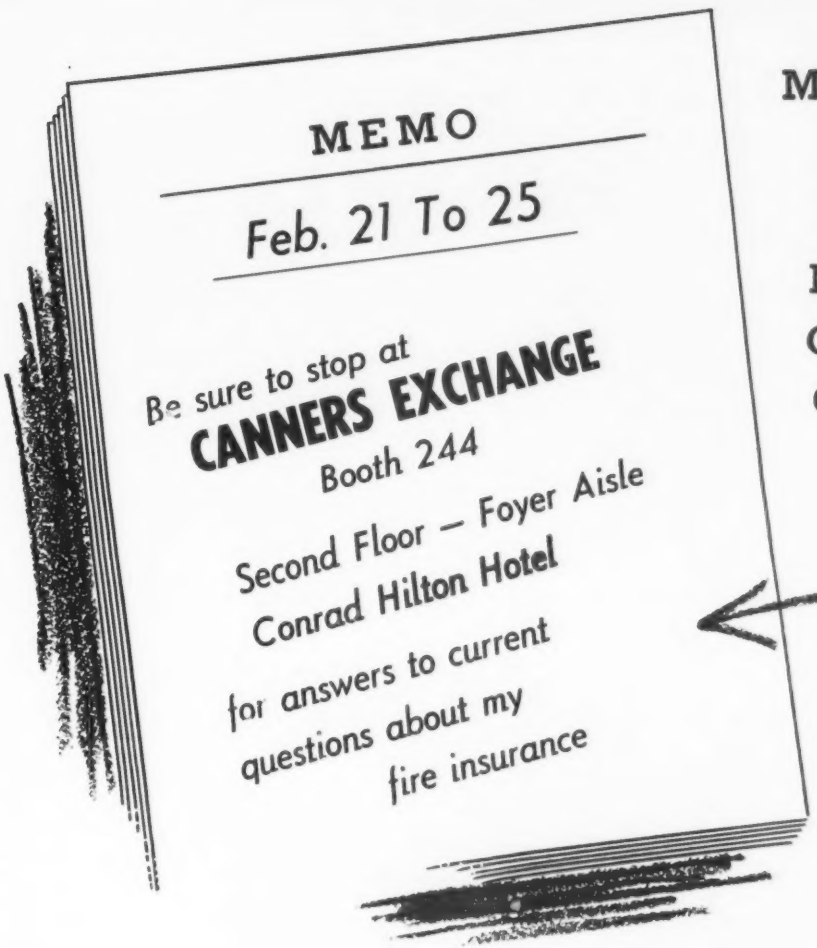
The ideal sample might be one taken after the product has been processed. With certain products and with certain groups of growers this could present a serious problem. In the case of juices, purees and many products this might be ideal; however, in the case of tomatoes, peaches, etc., for canning, or in the case of the utilization of poor processing techniques for any given product, this method of obtaining a sample could be very detrimental to the grower. All in all, the use of the finished product as a sample to indicate the quality of the raw product is not looked on with much favor. Surely, it is the color that the processor is most interested in, and it is the color that the consumer sees, but it would seem difficult to operate a processing plant if the processor had to rely on the finished product color as an index of raw product quality.

Another important question that arises when talking about the quality of any product is how to make the color measurement of the fruit or vegetable. The answer to this question is really found by determining what type of product is to be made from the particular fruit or vegetable. There exists today quite a controversy about the measurement of the color of tomatoes. One group prefers to make a puree or juice of the tomato; another prefers to cut the fruit and measure the overall internal cut surface; another prefers to extract the pigment or pigments and estimate the quantity of pigment present; while a fourth group prefers the older method of determining the skin color (outside color) of the fruit. In the case of the latter approach to color measurement, it should be noted that this technique has been in use for some time by most tomato inspectors as a means of grading a grower's load of tomatoes for

(Continued on page 96)

Fig. 3—The Beckman spectrophotometer, which measures amount of light through visible spectrum which is absorbed or transmitted by sample. Differences obtained between samples at each specific wave length of light are indicative of the color differences between the samples.

Fig. 4—Demonstrating the use of matching Munsell papers or painted models to the cut surface and whole fruits. Light of known quantities should be used to match a known standard to an unknown color. Here, a BB x 36 Macbeth filtered light unit (7500° K.) is source of light.



MEMO to *You*

if you plan to attend the

NATIONAL CANNERS CONVENTION

CHICAGO
Feb. 21 - 25

Our Services to the Industry

have produced these outstanding results:

- **45 years of consecutive annual savings refunds**
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P. S. **If you are not a policyholder, stop in or write us for full information**

45 years

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Food Packer

1953

National Canners Association Convention Program

Friday, February 20: 2:00 p.m.

Preview of production and management sessions, National Canners Association, North Ballroom, Conrad Hilton.

"Sharpening the tools of management" Fred C. Heinz, president, National Canners Association, presiding

Addresses: "The indispensability of production-management direction" from the point-of-view of the large canner: Roy G. Lucks, president, California Packing Corp; and from the point of view of the small canner: W. A. Free, president, Hungerford Packing Co., Inc.

Address: "Industry planning through two decades of annual conventions" by H. Thomas Austern, chief counsel, National Canners Association

Saturday, February 21: 10:00 a.m.

General session, National Canners Association, North Ballroom, Conrad Hilton. Fred C. Heinz, president, National Canners Association, presiding.

Invocation (to be announced)
Greetings from President Fred Heinz
Report of committee on nominations; Henry P. Taylor, chairman

Election of officers

Address: "The importance of production factors in the canned food industry" by Dr. Roy C. Newton, vice-president in charge of research, Swift & Co.

Address by the Honorable Robert A. Taft, United States senator from Ohio (subject to be announced)

Report of Committee on resolutions; Howard T. Cumming, chairman

Installation of new officers

Saturday, February 21: 2:00 p.m.

Conference, National Canners Association, South Ballroom, Conrad Hilton.

"Raw products procurement and management" W. Stanley Macklem, chairman, raw products committee, National Canners Association, presiding

Panel discussion: "Collective bargaining by growers"

"How do canning crop prices compare with prices of competing crops?" H. L. Stier, director of statistics, National Canners Association

"The federal antitrust laws as they apply to collective bargaining for raw materials" J. Harry Covington, Office of Counsel, National Canners Association

"How state marketing orders operate in California" (Speaker to be announced)
"How can we interest more farmers in growing our canning crops?" J. E. Countryman, California Packing Corp.

"Future policy and legal implications with respect to the problems of raw products procurement: If growers may bargain collectively, why not canners also? Should the Sherman Act be changed in this way?" H. Thomas Austern, chief counsel, National Canners Association

Conference, Upper Tower, Conrad Hilton; sponsored jointly by Canning Machinery and Supplies Association and National Canners Association Laboratories.

"High temperature-short time processing methods and equipment" C. E. Maier, research department, Continental Can Co., presiding

Discussion: "Continuous agitating retorts" C. K. Wilson, Food Machinery and Chemical Corp., and R. W. Kueneman, J. R. Simplot Co., discussion leaders

Discussion: "Aseptic canning" H. R. Goff, Dole Engineering Co., and L. W. Weix, Oconomowoc Canning Co., discussion leaders

Film: "End-over-end agitation" Introduced by Weld Conley, Chain Belt Co.

Address: "Sterilization by atomic radiation" B. H. Morgan, Washington Research Laboratory, National Canners Association

Sunday, February 22: 10:00 a.m.

Conference, National Canners Association, North Ballroom, Conrad Hilton.

"Quality protection and food regulation" Charles H. Mahoney, director, Raw Products Research Bureau, National Canners Association, presiding

Panel discussion: "The race between pests and pesticides" Dr. F. C. Bishopp, Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, discussion leader. (Panel members to be announced)

(Please turn the page)

Here's the ROYAL FAMILY that goes to work...

That's right Mr. Packer, the new H-A ROYAL LINE will work for you efficiently in your plant and sell your product on dealers shelves.

Designed for sales and consumer acceptance let ROYAL LINE take your product to her Majesty, Mrs. Consumer. Available in five selling sizes, ½ oz., 1 oz., 2 oz., 4 oz. and 8 oz.

HAZEL-ATLAS GLASS COMPANY

Wheeling, West Virginia

11:00 a.m.

Panel discussion: "The effect of applied chemicals on the flavor of canned foods". Ray B. Wakefield, chairman, Baby Foods Committee, National Canners Association, discussion leader. (Panel members to be announced).

2:00 p.m.

C. L. Rumberger, chairman, Washington Laboratory Advisory Committee, National Canners Association, presiding.

Address: "Enforcement developments" John L. Harvey, associate commissioner, U. S. Food and Drug Administration

Address: "The Supreme Court speaks on factory inspection—proposed amendments" H. P. Carothers, Office of Counsel, National Canners Association

3:30 p.m.

Panel discussion: "The Drosophila fruit fly problem," Panel members: J. J. Wilson, tomato products sanitation committee, National Canners Association; B. B. Pepper, New Jersey Agricultural Experiment Station; H. R. Smith, Washington Research Laboratory, National Canners Association; Ira I. Somers, Western Branch Laboratory, National Canners Association.

Monday, February 23: 9:30 a.m.

Conference, National Canners Association, South Ballroom, Conrad Hilton. "Field management problems," Charles H. Mahoney, director, Raw Products Research Bureau, National Canners Association, presiding.

Discussion: "Suggested yardsticks or techniques which can be used by the field staff to predict crop yields more accurately" F. W. Geise, American Can Co., and H. L. Seaton, Continental Can Co., discussion leaders

Panel discussion: "Are we getting our maximum crop production and at the same time improving and conserving the soil for future production?" J. B. Hester, Campbell Soup Co., discussion leader. Panel members: (to be announced)

Panel discussion: "How can we reduce field costs by more adequate mechanization?" J. D. Barnard, chairman, Raw Products Technical Advisory Committee, National Canners Association, discussion leader. (Panel members to be announced)

10:00 a.m.

Conference, National Canners Association, Upper Tower, Conrad Hilton. "Production problems and special products," B. S. Clark, American Can Co., presiding.

Panel discussion: "Electrolytic tinplate—a report of the research committee of the Can Manufacturers Institute"

"Performance of 0.25 pound electrolytic tinplate on cans for processed food products" W. J. Mutschler, Continental Can Co.

"Technical aspects of 1.00 pound electrolytic tinplate for processed food products" D. F. Sampson, American Can Co.

Address: "Dietetic canned foods" F. C. Bing, food consultant

Address: "Water utilization in canning" W. A. Mercer, Western Branch Laboratory, National Canners Association

2:00 p.m.

Conference, National Canners Association, Upper Tower, Conrad Hilton. "Improving efficiency of production and distribution" H. L. Stier, director of statistics, National Canners Association, presiding.

Address: "Detectors and correctors in management control" Carl Clewlow, industrial specialist advisor, Office of the Quartermaster General and professorial lecturer on business administration, George Washington University

Address: "How canners can use operations analysis to improve efficiency" Alfred N. Watson, Arthur D. Little, Inc., and Massachusetts Institute of Technology

Address: Increasing selling effectiveness through distribution research" C. W. Smith, McKinsey & Co., management consultants

Address: "Effective use of cost accounting by canners" Frank Elliott, director, Henry W. Peabody, Ltd., and industrial consultant, Office of the Quartermaster General

Tuesday, February 24: 10:00 a.m.

Conference, National Canners Association, South Ballroom, Conrad Hilton. "Military procurement" Alfred J. Stokely, Procurement Committee, National Canners Association, presiding.

Panel discussion: "Military menu planning" Lt. Col. J. S. Kujawski, chief, food service division, Office of the Quartermaster General

"Requirements and distribution of nonperishable subsistence" Lt. Col. J. W. Maxwell, chief, subsistence branch, Office of the Quartermaster General

"The principal considerations in effecting Quartermaster Corps procurement" Col. W. F. Durbin, chief, procurement division, Office of the Quartermaster General

2:00 p.m.

Fishery Products Conference, National Canners Association, North Assembly Room, Conrad Hilton; Milroy Warren, chairman, Fishery Products Committee, National Canners Association, presiding.

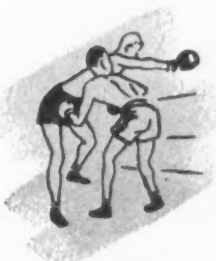
Address: "The tariff outlook for the fish canning industry" O. R. Strackbein, chairman, national labor-management council on foreign trade policy

Address: "The 83rd Congress and the fishing industry" Honorable Thor C. Tollefson, United States Representative from Washington

Address: "Marketing canned fishery products" Harley V. McNamara, National Tea Co.

AERATION | AGITATION | SLIPPAGE | RECIRCULATION

for Swimmers...



for Boxers...

for Skiers...

for Auto Racers...

but POSITIVE DISPLACEMENT for *Food Pumping*

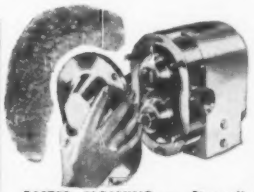
Waukesha P. D. PUMP

● High "Buzz-Saw" speed is not essential to overcome high pressure in food pumping. The higher the speed, in fact, the greater the turbulence created, with resultant churning, agitation and aeration of your product. That is why the slow-speed Positive Displacement principle of Waukesha Sanitary Pumps is best protection for your product. Through its gentle action, large open chambers, positive twin blade impeller action, there's no chance of product damage or waste.

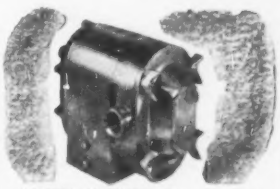
For dependable transmission of your product through high heads, regardless of its viscosity, use Waukesha Pumps. They provide best protection — the most important part of your entire product processing operation. Write for details on the use of Waukesha Slow Speed Sanitary Pumps for this purpose in your plant.

Waukesha 100% SANITARY PUMPS
Dependable Product of a Responsible Manufacturer

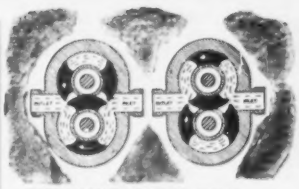
Check these Exclusive features:



FASTER CLEANING — Streamlined design, eliminating all dirt-catching crevices inside and outside — plus simple disassembly — saves clean-up time and labor.



LONGER SERVICE-LIFE — Fewer working parts, plus Waukesha's One-Piece O-Ring Sanitary Seal, and Standard Reconditioning Plan, mean longer trouble-free service.



CORROSION-RESISTANT METAL — all product contact parts are of Sanitary "Waukesha Metal" or Stainless Steel. Easy to clean, leaves no metallic flavor

WAUKESHA FOUNDRY COMPANY • WAUKESHA, WISCONSIN

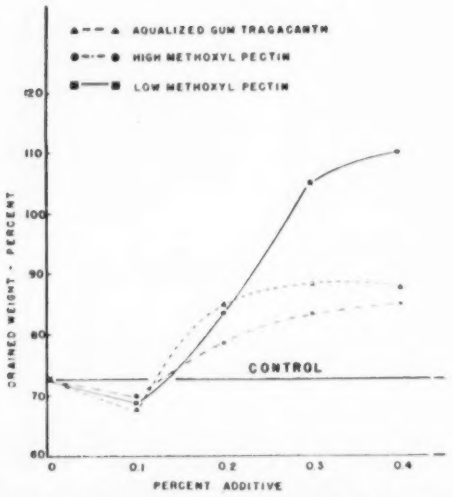


Figure 1. Drained weights of Latham Red raspberries (3:1, 50 percent syrup) with added colloids.

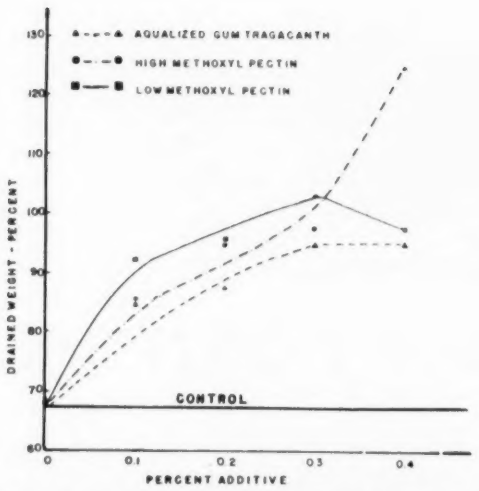


Figure 2. Drained weights of Sodus Purple respberries (3:1, 50 percent syrup) with added colloids.

Colloids help improve the quality of frozen raspberries

Ohio Station data show that colloidal agents increase drained weights of red and purple raspberries

RICHARD R. BARTON
formerly with the
Ohio Agricultural Experiment Station

THE PRINCIPAL OBJECTION to frozen raspberries is that when thawed the fruit tends to break down releasing an excess of free liquid. There have been several reports[1,2,3,4] that colloidal materials such as pectin and plant gums have been of value in improving the quality of frozen fruit. It was reported that when such agents were used there was a considerable increase in the drained weight of the fruit. In addition, at least one paper[4] reported that there was an improvement in the color of the treated fruit. These colloidal materials improved the drained weights and color of fruit by forming a gel on the surface of the fruit thereby retaining a greater quantity of liquid.

During the 1951 season, work was done with three colloidal materials to ascertain their effect on raspberries. Latham red raspberry was the red variety used in these tests and in addition a purple variety, Sodus, was also used. This purple berry is a cross between red and black fruit. The effectiveness of these colloids on the drained weight, color retention and eating quality was determined.

Experimental

The fruit was inspected and packaged in pint containers within eight hours after harvest. Three colloidal agents were dissolved in the 50 percent syrup that was used in concentrations of 0.1, 0.2, 0.3 and 0.4 percent by weight of fruit. The agents were: (1) aqualized gum tragacanth*; (2) 150 grade high methoxyl pectin; and (3) 320 grade, low methoxyl pectin. The packaged fruit was frozen at-20°F. (-28.8° C.) and stored at this temperature until it was examined.

Color measurements were made on the fresh and drained frozen fruit. A Photovolt meter was used with an adaption of the procedure of Worthington, Cain and Weigand[5]. In making measurements on Latham red raspberries the initial reading on the galvanometer was arbitrarily set at 20, using the grey or dark standard with the red filter in the instrument. An arbitrary reading of 40 was used with Sodus purple raspberries. The fruit was prepared for color measurement by first preparing a puree which did not include entrapped air. This puree was placed in a petri dish and 20 reflectance readings were made on each sample. These readings were averaged to determine the percent reflectance for each sample.

After three months storage, duplicate samples were held at room temperature (about 70° F.) until completely thawed. Drained weights were then determined by placing the fruit on No. 8 mesh screens for two minutes before weighing. Representative samples of the drained fruit were taken for color measurements. The quality of the frozen product was determined by a panel of four members. The taste panel rated the raspberries for appearance, color, texture and flavor.

Results

Texture: With both red and purple raspberries, the use of colloidal agents materially increased the drained weights. The concentrations that were most effective varied with the different agents used.

Aqualized gum tragacanth when used in concentrations of 0.2 to 0.4 percent increased the drained weights of Latham red raspberries

(Continued on page 92)

*(1) Gum tragacanth treated to permit easier dispersion Supplied by Glyco Products, Brooklyn, N. Y.

The Rex Agi-Tort Sterilizer employs the patented* *"end-over-end"* principle of agitation which assures positive, quick heating and cooling of can contents. It's the modern, efficient way to obtain top quality while substantially reducing processing time. Years of research, experimentation and testing have proved "end-over-end" rotation to be best method of obtaining fast, uniform heat penetration. You obtain the proven advantages of "High Temperature —Short-Time Processing" without danger of scorching, over-cooking or under-cooking.

The Rex Agi-Tort Sterilizer is especially suited for sterilizing in large cans—heretofore impractical. Difficult, viscous products can also be sterilized with full retention of quality and flavor. Why not investigate and find out how it fits your processing picture? Visit the Rex Booth No. 45 at the Canners' Show in Chicago, February 21st to 25th. Or if you prefer, write for complete details. Chain Belt Company, 4647 W. Greenfield Ave., Milwaukee 1, Wis.

*Continental Can Co. Patent No. 2,517,542

CHAIN BELT REX COMPANY ®

Chain Belt COMPANY OF MILWAUKEE

Typical of the new labels is the one shown above, indicating that "Ma Brown Ol' Fashun" pickles are ideal for a rolled roast of beef.

New labels mark a "first" in the pickle industry

Squire Dingee Co. redesigns labels to help the housewife in meal planning and to make shopping easier

THE 97-YEAR-OLD Squire Dingee Company of Chicago, to keep step with the greater emphasis on packaging in today's supermarkets, has redesigned the labels for its famous "Ma Brown" line of pickles. The basic change on these labels marks a first in the pickle industry—the labels picture in color a particular meat or sandwich product that is complemented best by the pickle in the jar. The company has identified the contents of the package with a specific dish to help customers in meal planning, according to George Drnek, Squire Dingee advertising and sales promotion manager.

In the modern supermarket with its impersonal selling, many display cases, and large variety of products and brands to choose from, nobody stands between the customer and the product. Squire Dingee felt it was "time for a change" in the design of their package, a change that would point up their brand as outstanding among the others on the shelf.

Before deciding what change had to be effected, the company took surveys among their employees to get reactions to suggested label improvements. These surveys went on for several months. Squire Dingee studied their competitors' labels and finally decided on a suggestion-type label. Charles Forsberg, package designer at the Carter, Gallatin Co. in Chicago, worked out the new label while still retaining its identifying characteristics as part of the "Ma Brown" family.

Color illustrations formed the major innovation, but the labels also were cleaned up typographically. The type faces have an old fashioned flavor which ties in with the "Ma Brown" trademark. Variety names are prominently displayed. The word "Ol' Fashun," for instance, appears in script type and the word "Quickles" (quick cured dill cucumbers) in condensed gothic.

The basic red and white checkered table cloth design and picture of "Ma Brown" remain on the company's preserves, jellies, relishes, beets, onions and mincemeat as well as on their pickles. These trademarks have been associated with the company for 20 years and are repeated on the metal screw cap. But "Ma's" face has been lightened and made easier to recognize. All the company products appear in color on the labels. Behind this change stand the concepts of impulse buying to make the shopper pick "Ma Brown" brand on impulse, and product visibility to stimulate appetite appeal. The ingredients of each product are listed in small, clear type. Five of the 14 new pickle labels illustrate the ingredients; nine labels picture a meat dish or sandwich.

Display shows mannequin dressed like Ma Brown "recommending" Squire Dingee preserves. Pictures of fruit appear on each label.

Identifying a cut of meat and a complementary type of pickle is meant primarily as a suggestion to the housewife, Mr. Drnek said. The company feels she will be helped and stimulated to buy because she can tell at a glance at the label the kind of pickle she should buy for the type of menu she has in mind. "With the new labels as a guide her decision and the sale are speeded up," he added.

(Continued on page 91)

what's **corn** doing hitting "70" down the pike?

CORN PERFORMS VITAL FUNCTIONS . . . IN MANY UNEXPECTED PLACES

Under the hood of your car for instance...derivatives of corn were used in casting the cylinder heads . . . also in extracting (from its oxide, alumina) the aluminum used in the pistons and other essential parts. This is but one of the numerous examples of how continuous basic research in corn helps American industry . . . helps you.

CORN PRODUCTS IN CANNING

For the canning industry Corn Products Refining Company supplies highest quality dextrose, corn starch and various types of corn syrups . . . recommended ingredients for many canning formulas.

We offer quality in volume supply unexcelled in the field. Complete technical service is available without cost or obligation. If you have a production problem why not check with Corn Products. We welcome your specific technical inquiries.

Manufacturers of
CERELOSE®
brand dextrose
PURITOSE®
brand corn syrup

CORN PRODUCTS REFINING COMPANY, 17 Battery Place, New York 4, N. Y.

Not just one show.....

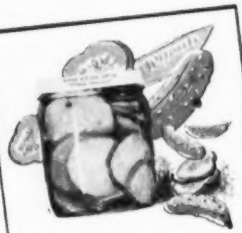
At the Vapor-Vacuum exhibit at the Chicago conventions—*as usual*—there'll be *nothing but packages*, just standing there—and speaking for themselves.

Yet, strangely enough, you'll find this simple, quiet exhibit just about the most dramatic thing in the show. For here, in one spot, you'll see an array of brands, ideas, styles and sizes of packaging, unequalled in all the world of food. Nowhere else can you see, all in one place, such a comprehensive, up-to-the-minute review of the latest and best.

We'll be looking for you!

PEANUT BUTTER

—another record of victory for vacuum sealing—showing the winners in the fight for the great peanut butter market.



PICKLES

See the evidence of a revolution—in this exhibit of top-brand pickles with Vapor-Vacuum Caps.

CATSUP

The closest thing to a solid front in food packaging—Vapor-Vacuum's catsup package line-up!

"Vapor-Vacuum"

BUT MANY!

CHEESE

To see why so much cheese is sold in glass, study 1953's line-up of Vapor-Vacuum Sealed cheeses!

PRESERVES

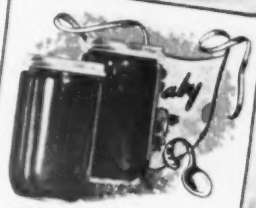
Most of the leaders in preserves are now Vapor-VacuumSealed. See them all . . . in one giant array . . . here!

JUICES

. . . a fast changing field! See what the leaders are doing. They're all on display in this big show.

VEGETABLES

A guide to new opportunities for packers . . . showing how, where, and when choice vegetables are going into glass packages.



BABY FOODS

—the little giant of the food field, on parade in its best dress, in our exhibit.

OLIVES

Olives, too, are on the march! See where they're going—at the Vapor-Vacuum exhibit.

FRUITS

For a lesson on the selling power of glass, see the exhibit of Vapor-Vacuumed fruits in glass!

MEATS

Meats can be beautiful! See for yourself —in the wide array of meat specialties of many kinds—at the Vapor-Vacuum show!

ETC., ETC.,

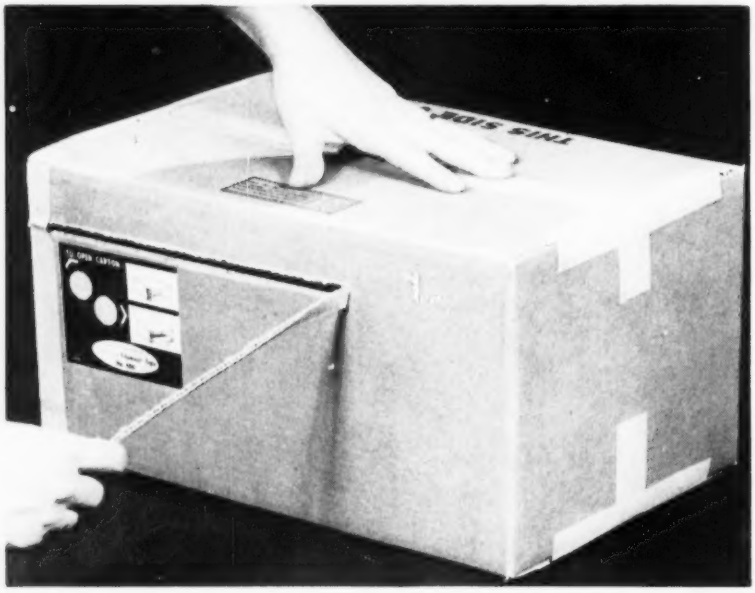
Not only the mass items but many others, too, await you at the great Vapor-Vacuum show at the Chicago Conventions!

2-53

...e" Sealing

What's new?

Supplies • Equipment • Trade Literature



NEW TEAR STRIP METHOD FOR CARTONS DEVELOPED

Fibreboard cartons that can be opened as easily as a pack of cigarettes—just "pull the tab" and off pops the top of the carton—have been unveiled by Minnesota Mining and Manufacturing Co., makers of "Scotch" brand tape.

The cartons are created by regular carton manufacturers with "Scotch" brand filament tape and a new, fully automatic machine that applies the tape to fibreboard blanks at a rate faster than one per second. The machine and specially cut and wound tape are not expected to be available for widespread use before the second quarter of 1953, the company said.

This "tear strip method" permits a narrow strip of tape to cut cleanly through a carton's heavy sides rather than merely through a cellophane outer wrap. Such "tear strips" have been tested successfully on cartons with bursting strengths up to 350 pounds, the firm said. The tape—laminated inside the carton—actually adds strength without increasing weight or affecting the carton's appearance, according to the company.

Further information available from Minnesota Mining and Manufacturing Co., 900 Fauquier St., St. Paul 6, Minn.

HEAVY-DUTY STEAM CLEANER

The BOE-600S Clayton Kerrick steam cleaner, designed originally for use at armed service bases, is now available in a civilian model for the first time, it was announced recently. The machine is capable of discharging up to 540 gallons per hour of pressure detergent spray and hot or cold pressure rinse simultaneously.

Equipped with a 60 gallon detergent concentrate tank and a 40 gallon fuel tank, the steam cleaner will operate for four hours continuously at maximum load and for additional hours at lesser loads without replenishment of detergent or fuel. A detergent metering device maintains the detergent-water ratio at the level found most effective, according to the manufacturers.

Write for illustrated literature to the Clayton Manufacturing Co., El Monte, Calif.

FORK TRUCK MANUAL

Now available to users of fork lift trucks and industrial tractors is a comprehensive manual for use in training lift truck operators. Titled "How to operate a lift truck," the 24-page booklet combines a two-color cartoon technique with a detailed manual approach.

The book contains information on the operation of a lift truck, preventive maintenance, safety, and basic materials handling. Drawings for setting up an obstacle course are included. The booklet is slanted for both the beginner and the experienced operator.

Available free from Hyster Co., 2902 N. E. Clackamas St., Portland 8, Ore.

HAND PUMP BULLETIN

A bulletin published recently illustrates hand pumps ranging in size from seven to 28-gallon per minute capacity for vegetable oils, syrups, solvents and other liquids. Also shown are models used as refueling systems for power equipment.

Available on request from Blackmer Pump Co., 1809 Century Ave. S. W., Grand Rapids 9, Mich.

10-INCH SAFETY BOOT

This new 10-inch safety boot insures dry feet with a minimum of weight, its manufacturers say. Patented sole has suction cups that grip wet floors; the boot is Neoprene-coated to resist corrosive action of fats and oils.

Manufactured by Lehigh Safety Shoe Co., Allentown, Pa.

STAINLESS STEEL METER

A stainless steel industrial meter developed recently can handle corrosive liquids common to the chemical,

(Continued on page 62)

The lid comes off

at the canning show . . .

booth 34 . . .

3 New Foxboro Developments

. . . and you're invited to the "opening" . . .
stop by, see the newest, most modern developments
in instrumentation for the canning industry.
Here's just a "taste" of what you'll see:

1 ***A new way to control any retort . . .***
uses one basic Foxboro Instrument.
Amazing simplicity and reliability.

2 ***Now . . . continuous density measurment***
and control for any evaporator
. . . most accurate system ever offered.
Measures total through-put . . .
no sampling, no floats.

3 ***All-New Saniflo Valve . . .***
the only sanitary valve designed for
proportional (throttling) control.
Nothing like it available anywhere!

See these Foxboro developments in action at the Show. Visit Booth 34.

FOXBORO
REG. U. S. PAT. OFF.

Complete Instrumentation
for the Canning Industry

FACTORIES IN THE UNITED STATES, CANADA, AND ENGLAND

Industrial attractions at the 1953 NCA convention

PORTABLE VINER COMBINE DEVELOPED

A portable viner combine for the harvesting of peas and lima beans has been developed by The Scott Viner Co., Columbus, Ohio after more than 10 years of experimental work. The company believes that this combine will make harvesting considerably simpler and will greatly reduce the cost.

The combine is trailed by a light tractor at a ground speed of approximately three-fourths to one mile per hour. A conveying device permits the threshed commodity to be delivered into containers. The vines are discharged into the field. Hauling costs can be cut to a minimum, the company says, because only the threshed commodity need be transported and handled.

Only a limited quantity is being offered for sale for the 1953 season, according to the company. A quarter scale model will be on display at the convention.

TO DISPLAY SEVERAL UNITS

To celebrate 85 years in the canning equipment business, the F. H. Langsenkamp Co., Indianapolis, will display several units at the convention. These include the continuous juice heater, Indiana laboratory pulper with new crusher-hopper accessory, new Lang-worth unscrambler, and Langsenkamp 3-way valve.

MACHINE DEMONSTRATION

The Horix Mfg. Co., Pittsburgh, will demonstrate how they brine, sauce or fill into wide mouth glass or tin containers at speeds up to 600 containers per minute. By this method, the company says, the need of a head spacer and washing before labeling are eliminated.

TO SHOW RETORT CONTROL

Automatic control of retorts, emphasizing the advantages of better control of product quality and the economical use of steam and water, will be demonstrated by The Foxboro Co., Foxboro, Mass. Shown for the first time will be the new saniflo control valve introducing a sanitary method of controlling food product flow. There also will be a new Foxboro system for precise control of density in an evaporator.

LIQUID FILLER

The Food Machinery & Chemical Corp. announces that featured in their convention display will be their famous liquid filler, the "Fil-Mor." Also shown will be pea and bean fillers with briner valves, a 30-pocket filler, nonshock caser, and prevacuumizing syruper. More than 60 FMC representatives will be on hand to greet visitors, the company says.

FILM TO BE PREMIERED

A 15 minute sound-color film report called "Packing Foods in glass in 1953" will be premiered at the Owens-Illinois Glass Co.'s booth. Center attraction in the booth will be a turntable display rotating a variety of food products in newer types of Duraglas containers.

ASEPTIC SEAMER

The W. F. and John Barnes Co., Rockford, Ill., will feature an aseptic seamer that they say is a revolutionary type developed for use with the Martin aseptic canning system. They also will show the electronic detector, a device for detecting capless closures, and samples of product packed on the Martin system.

CORN CUTTING BEE

The focal point of the TUC exhibit, according to The United Co., Westminster, Md., will be the 18th national canned corn cutting bee. Also featured will be the "cut-all" attachment for TUC cutters; the rod shaker with dewatering device for fruits and vegetables; improved TUC silker; sanitary mixer; can shaker; and several other TUC units.

MEETING PLACE

Northrup, King & Co., Minneapolis, announces that their booth will be used primarily as a meeting place to discuss any problems of customers regarding the production of vegetable crops. The company will exhibit pictures and frozen samples and will feature their spot rot resistant cucumber.

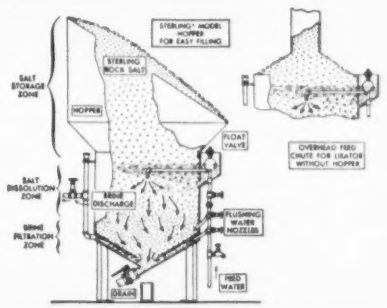
For complete list of exhibitors, turn to pages 69 and 71; for convention program, turn to page 46.

COMPARE

LIXATE BRINE vs. ORDINARY BRINE

	LIXATE BRINE	ORDINARY BRINE
Salt Storage	Above or near the Lixator hopper	In separate piles or bins
Brine Storage	None. Made as needed	In separate vats
Handling Costs	Zero	Cost of labor
Measurement	100% accurate	Guesswork
Saturation	100%	Haphazard
Preparation	Automatic	Cost of labor
Distribution	Piped	Cost of labor

the LIXATE* process for making brine



HOW LIXATOR WORKS

In the dissolution zone—flowing through a bed of Sterling Rock Salt which is continuously replenished by gravity feed, water dissolves salt to form 100% saturated brine. **In the filtration zone**—through use of the *self-filtration* principle *originated by International Salt Company*, the saturated brine is thoroughly filtered through a bed of *un*dissolved rock salt. The rock salt itself filters the brine. Nothing else is needed.

INTERNATIONAL SALT CO., INC.
SCRANTON, PENNSYLVANIA

SALES OFFICES: Atlanta, Ga. • Chicago, Ill. New Orleans, La. • Boston, Mass. • St. Louis, Mo. Newark, N. J. • Buffalo, N. Y. • New York, N. Y. Cincinnati, O. • Philadelphia, Pa. • Pittsburgh, Pa. Richmond, Va. • ENGINEERING OFFICES: Atlanta, Ga. Chicago, Ill. • Buffalo, N. Y. *Reg. U. S. Pat. Off.

MAKING BRINE need no longer be complicated, inaccurate, costly. Now, thanks to the LIXATE Process, developed by the International Salt Company, you can have brine *automatically*—where you want it—when you want it—*at the turn of a valve.*

Because this pure brine is *always* 100% saturated brine—because it *always* contains exactly 2.65 pounds of salt per gallon—your brine measurements are always exact—100% accurate.

Hundreds of companies have already saved thousands of dollars, have improved the quality of their products by installing the International Salt Company's *Lixate* Process. Let International's Industrial Division help *you.* Send the coupon below, today.

INTERNATIONAL SALT COMPANY, INC.
INDUSTRIAL DIVISION, Scranton 2, Pa.

I am interested in knowing what the *Lixate* Process can do for MY plant. Please have an International Industrial Engineer contact me as soon as possible. I understand there is no cost, no obligation.

FIRM NAME _____

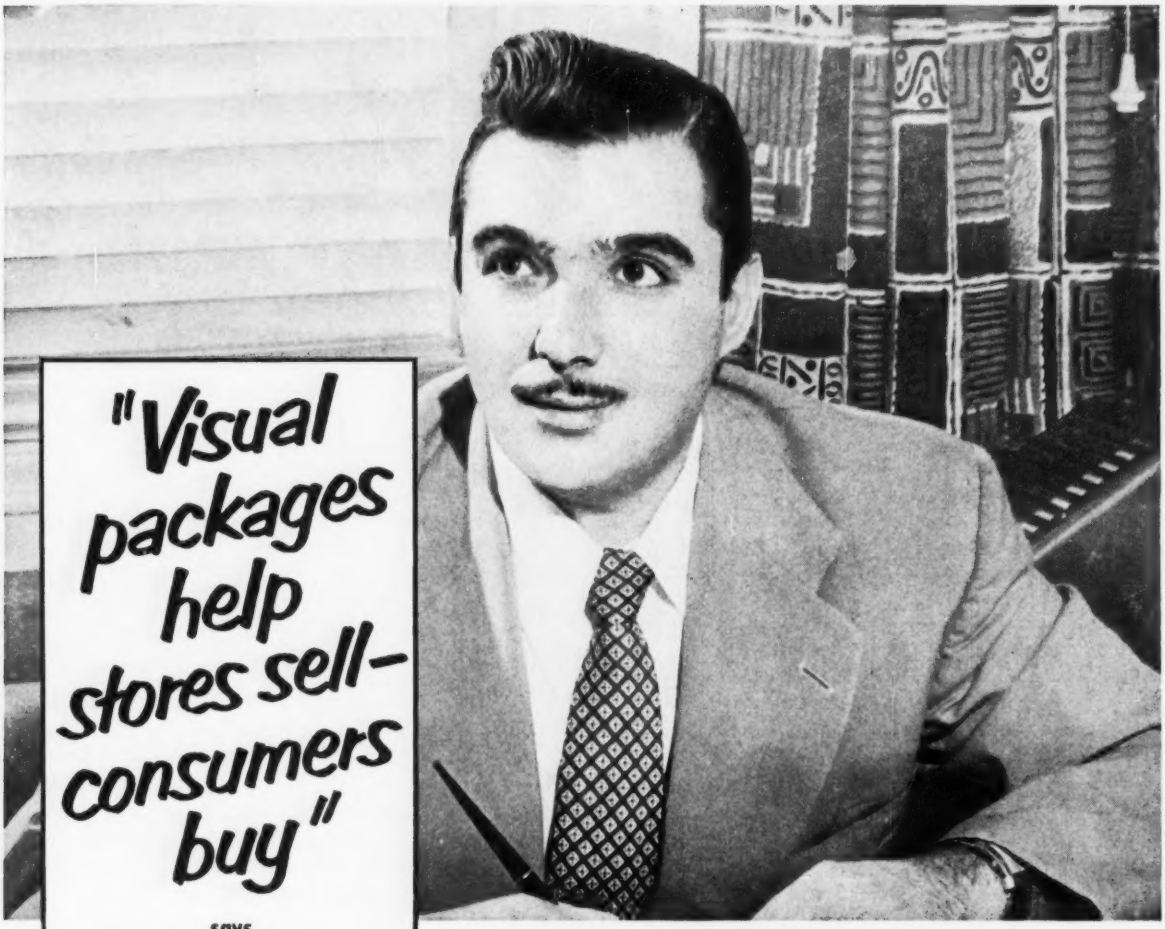
ADDRESS _____

CITY _____ ZONE _____

STATE _____

MY NAME _____

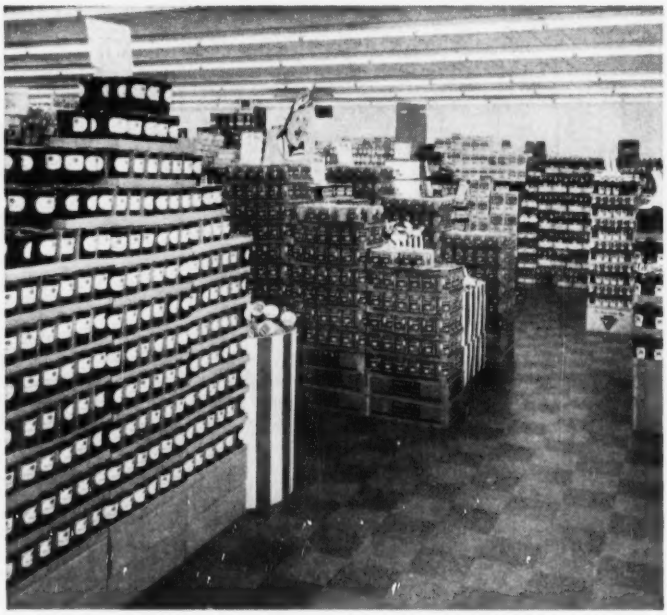
MY TITLE _____



"Visual packages help stores sell—consumers buy"

says
Seymour Lee Seleznow,
Director of Merchandising,
Food Fair Super Markets,
Metropolitan Washington, D. C.

"The self-service market requires that packages be salesmen. As Mrs. Consumer shops self-service style through every department in the store, she depends upon packages to tell her about the products. Visual packages, more than any other kind, help store operators sell and Mrs. Consumer buy."



Leading retailers are displaying more and more items in glass, because glass gives their shelves sparkling colorful appeal... increases total sales in canned-goods departments.

The time-proved glass package for prepared foods is the only visual package for processed* foods!

Glass has long been a *selling* package for jellies, ketchup, pickles, peanut butter and many other products. The trend to pack and sell more and more new food items in glass packages is proof of the selling power of glass.

Proof that glass packs in the canned-goods department increase total sales without using extra shelf space was established by careful market tests in the American Stores of Philadelphia. There, the new technique of displaying both glass and tin packs in the same space previously used for tin alone paid off, *in every instance*, by increased sales. TOTAL SALES of all items tested increased 35.6%.

Not only does visibility at point of purchase create *initial* sales, but the convenience of glass to the consumer pyramids *repeat* sales. Such advantages as visible inventory, and safe, easy refrigerator storage of unused portions are increasingly important to convenience-minded housewives.

*Heat-processed in container

Glass packs are perfect silent salesmen. The color and sparkle of glass attracts, the honesty of glass convinces.

Duraglas CONTAINERS SELL FOOD BY SIGHT

OWENS-ILLINOIS GLASS COMPANY, TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

WHAT'S NEW

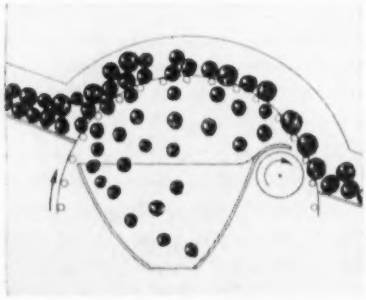
(Continued from page 56)

food, and other industrial processing fields. Based on the patented "Rotocycle" principle, this rotary displacement meter features a maximum capacity of 100 gallons per minute at a working pressure of 125 pounds per square inch.

Available from Rockwell Mfg. Co., 400 N. Lexington Ave., Pittsburgh 8, Pa.

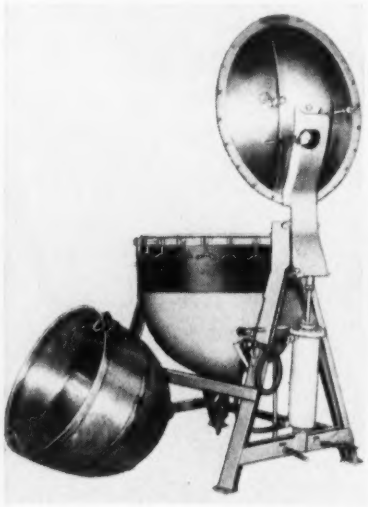
"VIBRO-CLEAN" SCREEN

Highlighting the exhibit of the Link-Belt Co. will be this "Vibro-Clean" screen, designed for effective removal of foreign matter from vegetables, and for rapid dewatering without damage to the product. The company also announced that many types of chains for conveying and power transmission will be shown.



ROLL-OVER TOMATO GRADER

The A. K. Robins & Co. roll-over tomato grader employs a unique operating principle—a rotary screen rather than a traveling belt type screen, according to the company. The Robins engineering department claims that it grades out as high as 95 percent. Because the fruit is picked up by the rotary screen on its upward motion, fruit cannot pile up and become damaged, the company says.



PRESSURE KETTLE

The Lee Metal Products Co., Inc., Philipsburg, Pa., will exhibit for the first time a pressure kettle with perforated basket for whole chickens. This provides for separating the oil from the broth before removing the basket of chicken.

Also shown will be a complete line of stainless steel equipment, including steam jacketed kettles, mixing tank, and agitators.

NEW LIFT TRUCK

A combination hydraulic-electric lift truck was put on the market recently. Designed for 1,000 pound capacity loads, the lift truck is manually propelled and will handle an infinite range of light and medium materials handling jobs. By finger tip electrical control, the operator can raise a load four feet in 15 seconds, according to the manufacturers.

For literature and price information write Century Products Co., 5925 Highway 7, Minneapolis 16, Minn.

GRAVITY CONVEYOR BOOKLET

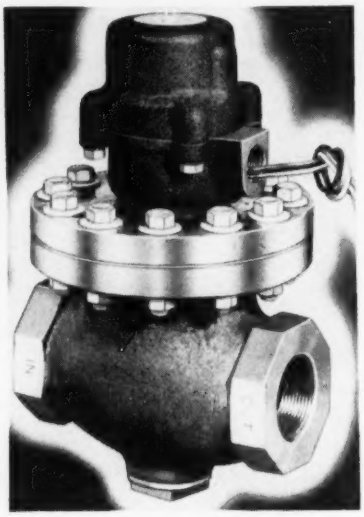
A 16-page bulletin that describes several types of FMC gravity conveyors was published recently. The bulletin gives suggested applications and illustrates with photos and blueprints four types of conveyors.

Copies available from Packing Equipment Div., Food Machinery & Chemical Corp., Riverside, Calif.

CATALOG PUBLISHED

A 14-page illustrated catalog on boiler-burner units was published recently. Full data are given to help the reader select the proper unit for any application to high or low pressure heating, power or process steam.

Copies available from Kewanee-Ross Corp., Kewanee, Ill.



ELECTRIC VALVE BULLETIN

A bulletin now available shows typical applications of the Atkomatic solenoid electric valves for high pressure lines. These valves are made in sizes from one-half to one and one-half inches and for pressures to 3,000 psi. They are designed with three moving parts and no external linkage.

Available from Atkomatic Valve Co., Dept. 68, 545 Abbott St., Indianapolis 25, Ind.

NEW YEARBOOK

STATISTICAL YEAR BOOK, 1952—TIN: TINPLATE: CANNING. *Published by the International Tin Study Group, The Hague, Holland.* 1952. 268 pages. $5.60.

The "Statistical Year Book" recognizes the fact that the canning industry is one of the greatest users of tin and tinplate in the world. For the first time this book provides the canning industry with comprehensive statistics on an international scale. The book includes seven maps and charts and general articles on international cooperation in the tin industry, the consumption of tin, and the organization of the free markets where the tin price is arrived at.

Du Pont MARLATE

methoxychlor insecticide

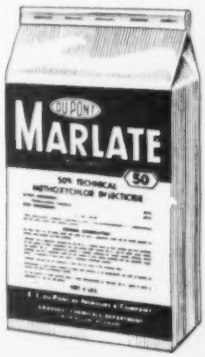
Gives you Insect Control With Minimum Residue Problems

You know how important it is to get your fruits and vegetables free of insect damage or infestation, and also free of toxic residues.

That's where Du Pont "Marlate" methoxychlor insecticide fits in. For "Marlate" controls many of the major insect pests of food crops all season long. And it can be used up to 7 days before harvest and still keep your residue problem at a minimum.

This outstanding combination of qualities makes "Marlate" methoxychlor extremely valuable on such processing crops as lima and snap beans, peas, cabbage, cherries, peaches, tomatoes, cucurbits, prunes, and many others. Among the many insects "Marlate" controls are the following:

Mexican bean beetle	Cucumber beetles	Cherry fruit fly
Flea beetles	Fall armyworm	Cherry fruit worm
Leafhoppers	Pea weevil	Japanese beetle
Cabbage worms	Oriental fruit moth	Blister beetles
Bean leaf beetle	Plum curculio	



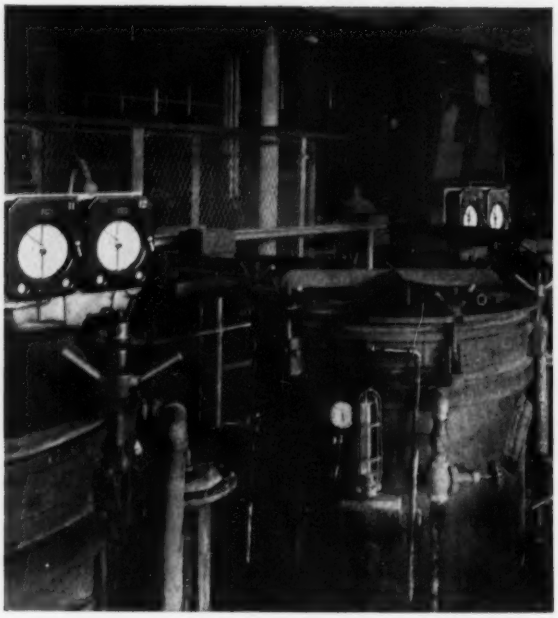
Use "Marlate" 50, a 50% methoxychlor wettable powder in sprays. Specify "Marlate" in your dust mixtures.

E. I. Du Pont de Nemours & Co. (Inc.)
Grasselli Chemicals Department,
Wilmington, Delaware

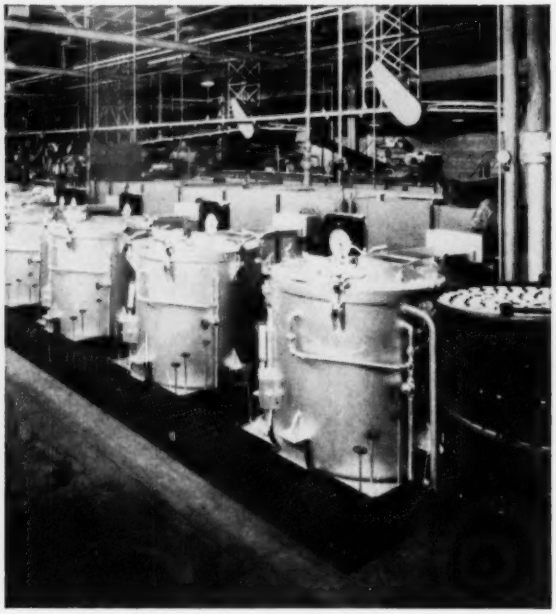
DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

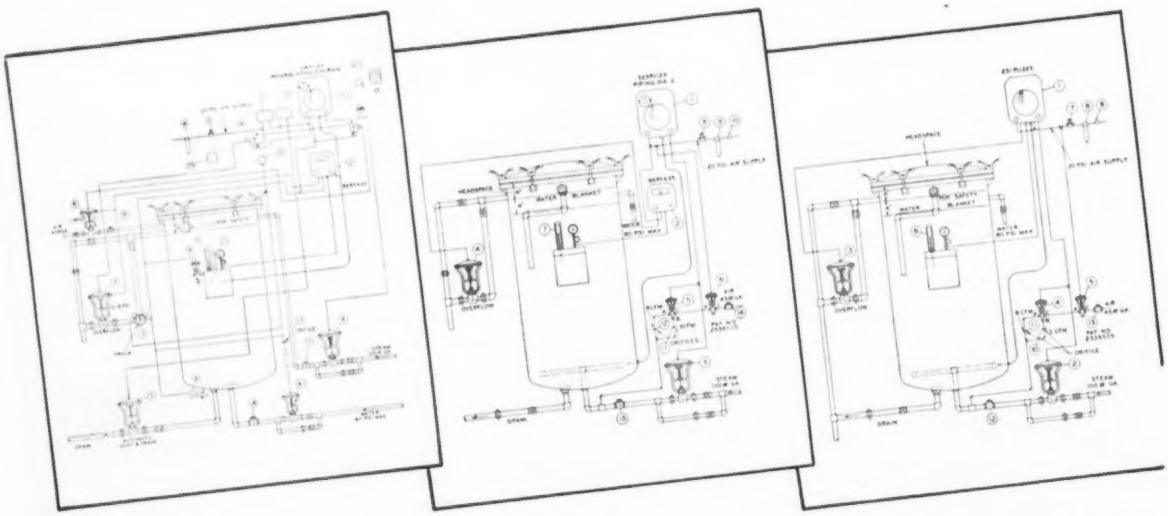
Everything you can can



The W-1 Control System shown in use above is designed for water processing glass packages with standard caps. Provides full advantage of positive water circulation in obtaining uniform cooling and cooking with a minimum air consumption.



The W-5T system incorporates all the features of the W-1 system and in addition automatically times cooking period and signals end of cook. Pressure inside retort maintained in positive relation to pressure in containers throughout cycle.



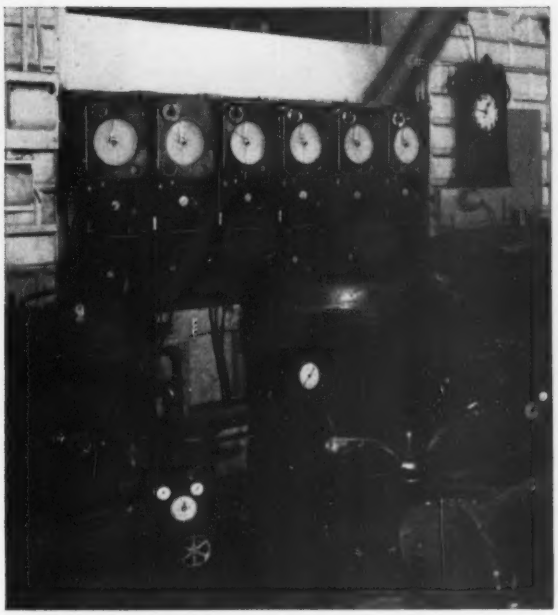
SP-6AV. Automatically controls processing cycle, venting, temperature and timing, pressure control during cooling, admission and shut-off of water, blows down retort.

W-5T. Water controlled at starting point. Controls pressure throughout cycle and processing temperature. Automatically times period, signals end and shuts off steam.

W-1. Controls pressure during entire cycle. Controls processing temperature. Can be converted to more fully automatic systems.

. . . you can can better

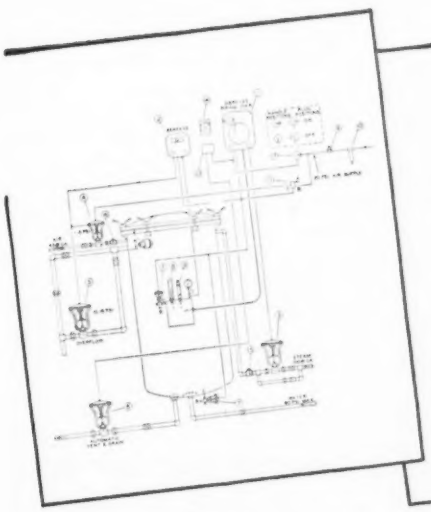
with Taylor Retort-Control Systems



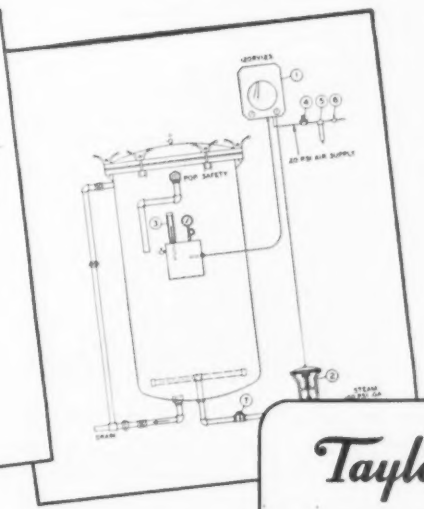
The SP-6AV system for steam cook with pressure cooling has increased production capacity up to 20% for many users. For No. 2½ cans or larger. Completely automatic. Operator simply loads retort and sets timer dial.

AND not only can you can better—you'll can more, more economically! Shown on these pages are some representative examples of Taylor Retort Control Systems, ranging from the most simple type of control necessary for uniform processing, to completely automatic systems, where each phase of the retorting is instrumented. Taylor has designed these systems, for both steam and water processing applications, for some of the best known names in the canning industry. Each system is a proven method, conservative in its principles yet modernized for streamlined production of top quality products.

Taylor makes precision instruments: Taylor has the processing know-how: Taylor's experienced Field Engineers give quick service when it's needed. Three good reasons for consulting your area engineer and writing for **Catalog 500**. Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada.



SP-5TV. Automatically controls processing temperature, venting, process period timing, pressure during cooking, draining of retort.



S-1. Automatically controls processing temperature. Can be converted to more fully automatic systems.

Instruments for indicating, recording and controlling temperature, pressure, flow, liquid level, speed, density, load and humidity.

SEE US AT THE CANNERS' SHOW, BOOTH NO. 16

Taylor Instruments
MEAN
ACCURACY FIRST
IN HOME AND INDUSTRY

The Market Place

News of Promotion & Selling

New preserve package adopted

Bagwell Preserving Co., Nashville, Tenn., has adopted the 10 ounce glass tumbler and the one and a half pound standard oval jar as shown above for packaging its line of 20 varieties of jellies and preserves. The package change celebrates the company's 30th year in the preserving business.

Owens-Illinois Glass Co. designed and supplies the Duraglas tumblers and jars; caps by White Cap Co.; labels by Brandau-Craig-Dickerson, Nashville.

Frozen fruit, vegetable survey

Birds Eye and Snow Crop pretty well dominate the frozen fruit and vegetable market in 32 Illinois markets, the seventh annual Illinois Daily Newspaper Markets consumer analysis shows. However, a sharp increase in the number of brands reported is to be noted.

In the frozen fruit classification, Birds Eye holds a 44.6 percent share of the market while Snow Crop has 19.8 percent, and Libby's shows a 7.7 percent average consumer preference. In the markets studied this year, 41.9 percent of the families reported they bought some brand of frozen fruit, a slight increase over the percentage reported in 1951. The 1952 study lists 37 brands of frozen fruit with at least a one percent consumer preference, whereas last year 21 brands were listed.

In the frozen vegetable class, Birds Eye has 49.7 percent of the market, while Snow Crop has 19.9 percent and Libby's 7.4 percent. In 1952 55.8 percent of the families surveyed reported they bought some brand of frozen vegetables; in 1951 this percentage was 53.1. The number of brands reported increased from 14 last year to 32 this year.

Frozen food menus available

Helpful menu ideas for housewives buying Cedergreen frozen foods are now available in a full-color folder which is being distributed nationally. Featured are recipes for green beans, mixed vegetables, lima beans, and strawberries, and a list of the full Cedergreen line of frozen foods.

Labels carry recipes

New back labels for bottles of Derby barbecue sauce, manufactured by Glaser, Crandell Co., 2000 S. Western Ave., Chicago, now carry tested recipes for use of the sauce. An illustrated recipe booklet, "More appeal in every meal," may be obtained by writing the manufacturer.

Strawberry package wins award

First prize for new package design at the New York food merchants convention went to River Valley's frozen strawberries. Distributed by C. J. Drislane Co., Inc., White Plains, N. Y., and Albany Frosted Foods, Albany, N. Y., River Valley made its debut in 1945 with 10 items. Now 30 products carry the River Valley brand name.

Pickles, onions packed in glass

Extra fancy quality pickles and onions are packed in glass containers and sealed under steam vacuum by Whiteman Food Products Co., Philadelphia. Varieties include sweet pickles, gherkins, tiny cocktail gherkins, baby dills, sweet chips, midgets, mixed pickles, sour gherkins, and cocktail, sweet and pickled onions.

Jars include eight and 16-ounce paragon, pint ice box and round quart styles. Glass containers, green and white vacuum closures and Anchor Steriseal sealing machine are supplied by Anchor Hocking Glass Corp., Lancaster, Ohio. Green and gold labels by Diamond Printing & Label Co., Philadelphia.

Canned fish gift box

Two new canned fish products have been added to the Christmas gift box offered this year by Pacific American Fisheries, Bellingham, Wash. These are Sam-o-lets and Sirloin Salmon, salmon products packed without skin or bones in P.A.F.'s Bellingham and Alaskan plants.

The gift box also includes smoked oysters, salmon hors d'oeuvre, salmon sausage, canned salmon, crab, and Tonnos, a tuna product. The container, manufactured by Union Paper Box Co., Seattle, and printed by Metropolitan Press, is olive green, printed with a red, gold, and buh design. Deming & Gould, salmon brokers and distributors, market all P.A.F. products.

Apples add tang to salt sales

Continuing its "related item" sales story, Morton Salt Co. will say "any apple worth its salt . . . is worth Morton's" in consumer magazines and on 3,000 billboards during the first quarter of 1953. Four famous American varieties of apples will be pictured in color in some of the ads.

AN IMPORTANT ANNOUNCEMENT

To all Can and Container Manufacturers

Bliss
Can Machinery

- Slitters—Single
- Slitters—Duplex
- Bodymakers
- Flangers
- Beaders
- Seamers
- Testers
- Scroll Shears
- Strip Feed Presses
- Curlers

E. W. BLISS COMPANY is now in the process of re-activating its complete lines of automatic and semi-automatic can-making machinery for both general line and sanitary can production.

New Designs of high-speed can-making machinery are being made, and many existing machine designs are being modernized.

Enlarged Service Facilities will speed processing of orders for replacement parts and tooling.

You're invited to visit our Booth No. 115 at the Canners' Show

E. W. BLISS COMPANY • 50 Church St., New York 7, N. Y.

IF YOU CUT THESE PRODUCTS

Use these URSCHEL high speed models for

	DICING	SLICING	STRIP CUTTING
Apples	Model B or R	Model M	
Bamboo shoots		Model O	Model R
beans (*cross-cut slicing*)		Model 30	
beets	Model B	Model Y	Model B
broccoli	Model J	Model O	
Cabbage (*for chopped kraut*)	Model B		
cabbage (*fine dicing for relish*)	Model R		
carrots	Model B	Model O	Model B
carrots (*quartering lengthwise*)			Model AA
cauliflower (*fine dicing for relish*)	Model R		
celery	Model J or L	Model O	
celery (*fine dicing for relish*)	Model R		
cherries	Model R	Model R	
chicken	Model L		
citron (*raw, brined, candied*)	Model B or R		Model B or R
citrus peel (*fresh or brined*)	Model J		Model J
citrus peel (*fresh, brined, candied*)	Model L		Model L
citrus peel (*fine dicing for bakery goods and candies*)	Model R		
greens (*collards, kale, mustard, parsley, turnip, etc.*)	Model J		Model J
lemons		Model O	
meats (*all kinds*)	Model L or SL		
melon rind	Model B		
mushrooms	Model 6	Model M	Model R
mushrooms (*blanched*)	Model B		
mushrooms (*fine dicing for condiments*)	Model R		
Okra		Model O or 30	
onions	Model B or R	Model M	
oranges		Model O	
peaches	Model 6		Model R
peaches (*for baby foods and preserves*)	Model R		
pears	Model 6		
peppers (*raw, brined, cooked*)	Model J or L		Model J or L
peppers (*fine dicing for relishes*)	Model R		
pickles		Model O	
pickles (*quartering lengthwise*)			Model AA
pickles (*sweet mixed chunks*)	Model O and AA		
pickles (*large dices or fine dicing for relishes*)	Model R		
pineapple (*for crushed, diced*)	Model R		
pineapple (*reslicing to chips*)		Model O	
pork (*belly or fat back*)		Model O	
potatoes	Model B	Model U or M	Model U
rhubarb		Model O	
rutabagas	Model B		Model B
Spinach	Model J		
strawberries		Model M	
sweet potatoes	Model B		Model B
tomatoes (*small*)		Model M	
turkey	Model L		
turnips	Model B		Model B
Water chestnuts		Model O	

PRECISION HIGH-SPEED FOOD CUTTING EQUIPMENT

URSCHEL LABORATORIES INC.
VALPARAISO, INDIANA

manufacturers of precision, high speed cutting equipment for delicate food products

Stop in at Urschel Booth #3 • Canners' Show • Chicago Feb. 21-25

Food Packer

Canning Machinery and Supplies Association

Exhibitors at the 1953 National Canners Convention

"GB" indicates Conrad Hilton's Grand Ballroom and Normandy Lounge

"MH" indicates Conrad Hilton's Machinery Hall, Annex and Foyer

	Booth No.
A-B-C Packaging Machine Corp.	MH 51
Ace Specialty Manufacturing Co.	MH 40
Acme Steel Co.	MH 54
Addressograph-Multigraph Corp.	MH 103
Algene Marking Equipment Co.	MH 130
Aluminum Co. of America	MH 43
The Aluminum Cooking Utensil Co.	MH 53
American Can Co.	GB 201
American Machinery Corp.	MH 49
American Steel Dredge Co., Inc.	GB 240
The Max Ams Machine Co.	MH 124
Anchor Cap & Closure Co. of Canada, Ltd., and Anchor Hocking Glass Corp.	GB 219
Angelus Sanitary Can Mach. Co.	MH 55
Armstrong Cork Co.	GB 228
Associated Seed Growers, Inc.	GB 232
Audubon Wire Cloth Corp.	GB 218
Baldwin-Lima-Hamilton Corp.	MH 50
Ball Brothers Co.	GB 230
The Barker Co.	MH 47
W. F. & John Barnes Co.	MH 2
Barry-Wehmiller Machinery Co.	MH 8
Basic Vegetable Products, Inc.	GB 233
Berlin Chapman Co.	MH 52
Berry Canvas Goods, Inc.	MH 104
E. W. Bliss Co.	MH 115
Brooks Chemicals, Inc.	GB 229
Buflovak Equipment	MH 12
Burt Machine Co.	MH 32
The Calvert Lithographing Co.	GB 202
The Cambridge Wire Cloth Co.	MH 117
The Canner Publishing Co.	GB 238
Canners' Machinery, Ltd.	MH 27
The Canning Trade	GB 246
Chain Belt Co.	MH 45
Chisholm-Ryder Co., Inc.	MH 4
C. I. T. Corp.	GB 213
Columbia Eng. Service Co.	MH 17
Container Corp. of America	GB 204
Continental Can Co.	GB 209
Corn Products Sales Co.	GB 231
Corneli Seed Co.	GB 221
Crites-Moscow Growers, Inc.	GB 207
Crown Can Co. and Crown Cork & Seal Co.	MH 7
Dewey & Almy Chemical Co.	GB 217
Diagraph-Bradley, Inc.	MH 121-122
The Diversey Corp.	GB 223
Dixie-Way Machine Co.	MH 111-112
James Dole Engineering Co.	MH 2
Douglas-Guardian Whse. Corp.	GB 234
Dudley Machinery Co.	MH 9
Economic Machinery Co.	M 28
Electric Sorting Machine Co.	MH 29
Elgin Manufacturing Co.	MH 15
Fawick Airflex Co., Inc.	MH 18
J. L. Ferguson Co.	MH 19
A. T. Ferrell & Co.	MH 129
Ferry-Morse Seed Co.	GB 203
The Filler Machine Co., Inc.	MH 13
Fiske Brothers Refining Co.	MH 106
The W. J. Fitzpatrick Co.	MH 23
Food Engineering	GB 236
Food Machinery & Chemical Corp.	MH 1
FOOD PACKER	GB 241
The Foxboro Co.	MH 34
Fungitrol Chemicals, Inc.	MH 102
Gallatin Valley Seed Co.	GB 224
The Girdler Corp. (Votator Div.)	MH 113
The Griffith Laboratories	GB 237
Groen Mfg. Co.	MH 107-108
Frank Hamachek Machine Co.	MH 31
Hazel-Atlas Glass Co.	GB 215
The Heekin Can Co.	GB 248
The Hinde & Dauche Paper Co.	GB 206
Horix Mfg. Co.	MH 38
Huntley Mfg. Co.	MH 33
The Huron Milling Co.	MH 126
International Minerals & Chemical Corp.	GB 235
Kieckhefer Container Co.	GB 210
F. H. Langsenkamp Co.	MH 100
Lee Metal Products Co., Inc.	MH 37
Link-Belt Co.	MH 36
Marsh Stencil Machine Co.	MH 127
Michael-Leonard Co.	GB 243
Michigan Lithographing Co.	GB 212
Minneapolis-Honeywell Regulator Co.	MH 41
Mojonnier Bros. Co.	MH 10
Morrison Bros. Seed Co.	GB 216
Morton Salt Co.	MH 6
Motorola, Inc.	GB 226
National Can Corp.	GB 220
National Container Corp.	MH 101
New Jersey Machine Corp.	MH 26
Niagara Filter Corp.	MH 114
Northrup King & Co.	GB 242
Oakite Products, Inc.	MH 105
Geo. J. Olney	MH 42
Owens-Illinois Glass Co.	GB 200
The Pfaudler Co.	MH 44
Planters Mfg. Co., Inc.	MH 128
Productive Equipment Corp.	MH 24
Pure Line Seeds, Inc.	MH 125

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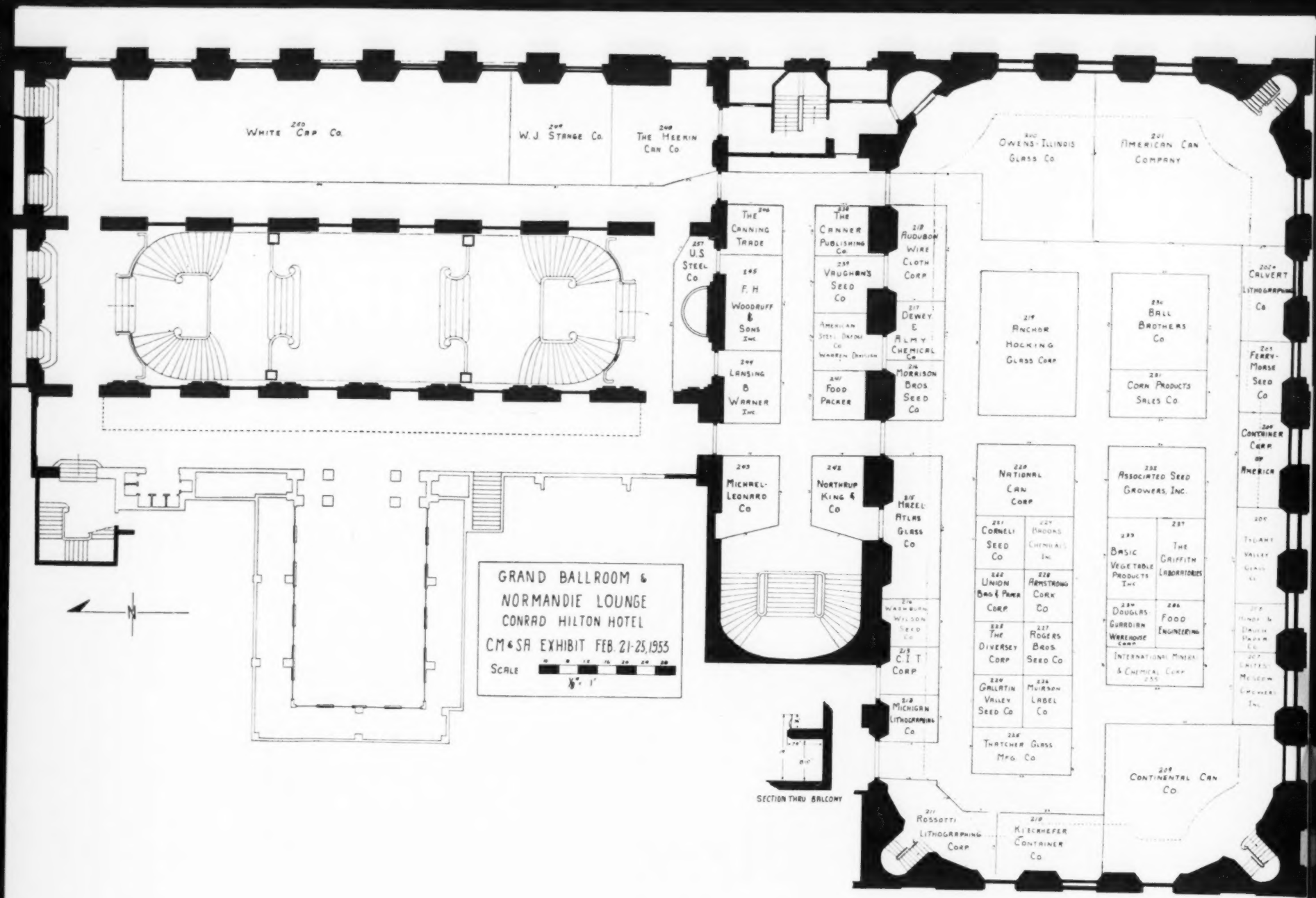
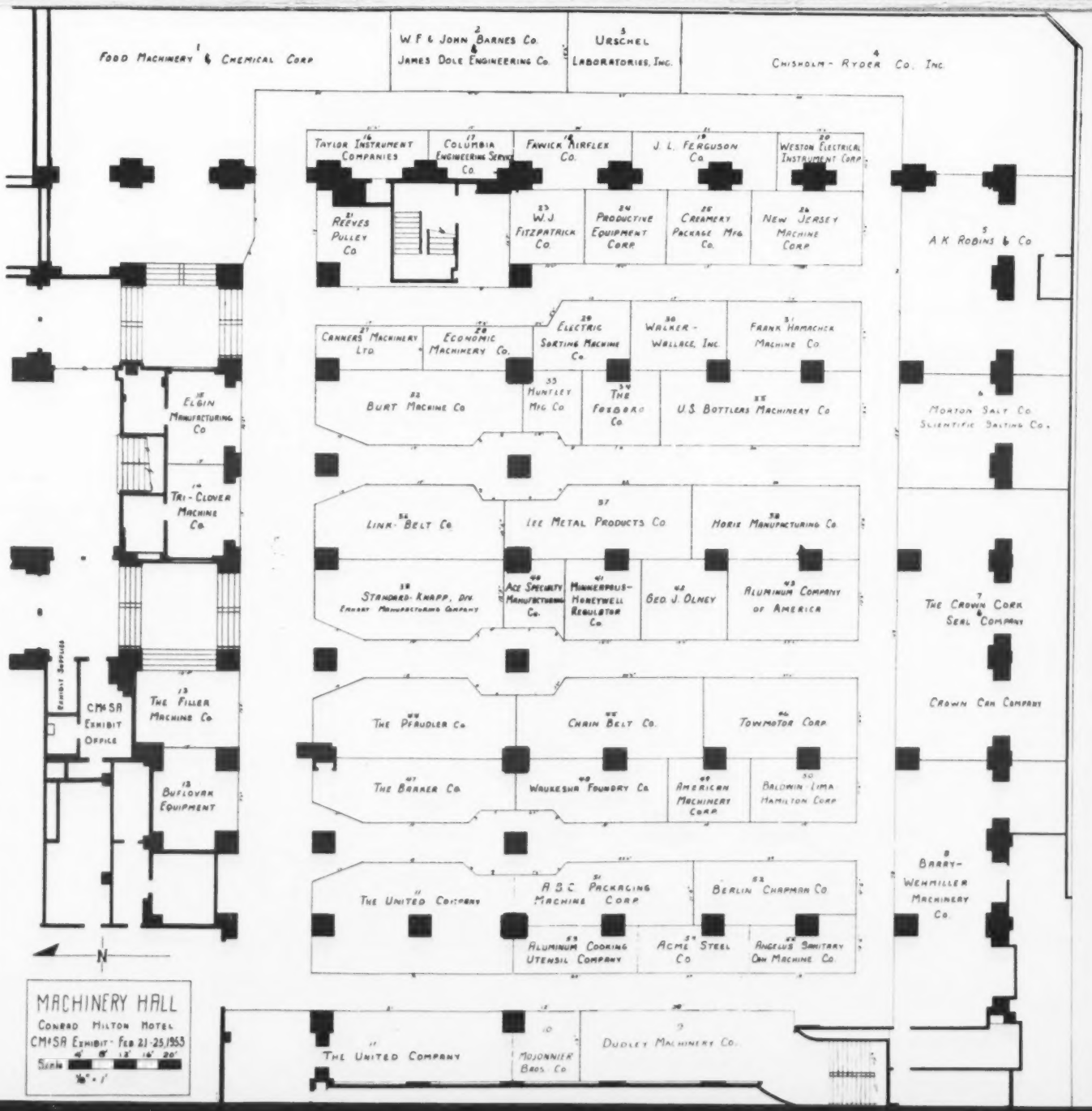
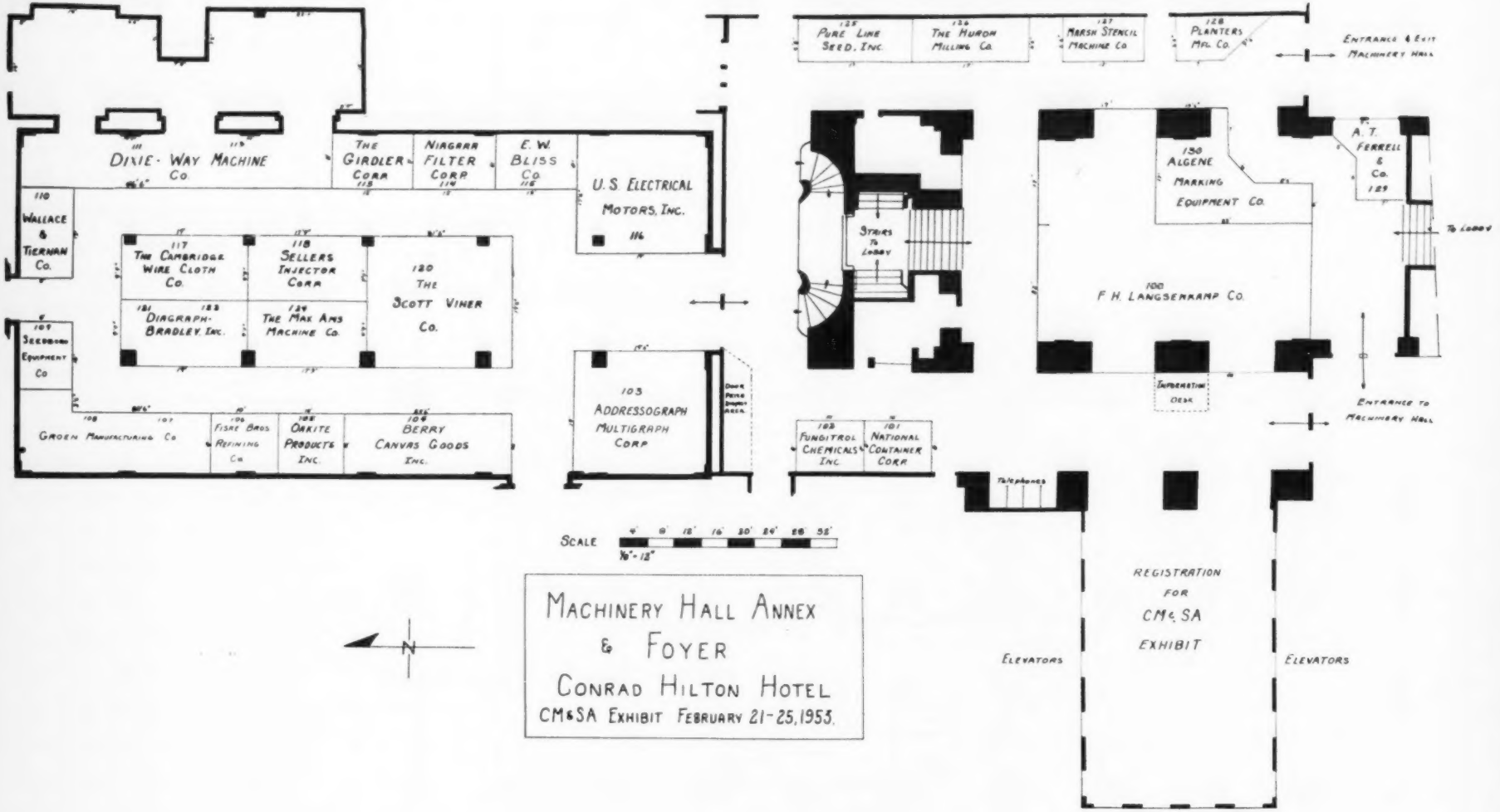

250 WHITE CAP CO.
249 W. J. STRANGE CO.
248 THE HEEKIN CAN CO
OWENS-ILLINOIS GLASS CO
AMERICAN CAN COMPANY
240 THE CANNING TRADE
238 THE CANNER PUBLISHING CO
237 U.S STEEL CO
245 F. H WOODRUFF & SONS INC
239 VAUGHANS SEED CO
AMERICAN STEEL DRUM CO WARREN DIVISION
244 LANSING B WARNER INC
241 FOOD PACKER
218 AUDUBON WIRE CLOTH CORP
217 DEWEY E ALMY CHEMICAL CO
216 MORRISON BROS SEED CO
219 ANCHOR HOCKING GLASS CORP
230 BALL BROTHERS CO
231 CORN PRODUCTS SALES CO
207 CALVERT LITHOGRAPHING CO
206 FERRY-MORSE SEED CO
208 CONTAINER CORP OF AMERICA
209 TYLANT VALLEY GLASS CO
243 MICHREL-LEONARD CO
242 NORTHRUP KING & CO
215 HAZEL ATLAS GLASS CO
214 WARBURTON WILSON SEED CO
213 C I T CORP
212 MICHIGAN LITHOGRAPHING CO
220 NATIONAL CAN CORP
221 CORNELI SEED CO
222 BROOKS CHEMICAL INC
232 ASSOCIATED SEED GROWERS, INC.
233 BASIC VEGETABLE PRODUCTS INC
234 THE GRIFFITH LABORATORIES
235 DOUGLAS GUARDIAN WAREHOUSE CORP
236 FOOD ENGINEERING
INTERNATIONAL MINERAL & CHEMICAL CORP 255
222 UNION BAG & PAPER CORP
223 ARMSTRONG CORK CO
224 THE DIVERSEY CORP
225 ROGERS BROS. SEED CO
226 GALLATIN VALLEY SEED CO
227 MURRSON LABEL CO
228 THATCHER GLASS MFG. CO
GRAND BALLROOM & NORMANDIE LOUNGE
CONRAD HILTON HOTEL
CM&SA EXHIBIT FEB. 21-25, 1955
SCALE
SECTION THRU BALCONY
209 CONTINENTAL CAN CO.
211 ROSSOTTI LITHOGRAPHING CORP
210 KLEINHEFER CONTAINER CO

Reeves Pulley Co.	MH 21
A. K. Robins & Co., Inc.	MH 5
Rogers Bros. Seed Co., Inc.	GB 227
Rossotti Lithographing Corp.	GB 211
Scientific Salting Co.	MH 6
The Scott Viner Co.	MH 120
Seedburo Equipment Co.	MH 109
Sellers Injector Corp.	MH 118
Standard-Knapp	MH 39
Wm. J. Stange Co.	GB 249
Taylor Instrument Companies	MH 16
Thatcher Glass Mfg. Co., Inc.	GB 225
Towmotor Corp.	MH 46
Tri-Clover Machine Co.	MH 14
Tygart Valley Glass Co.	GB 205
Union Bag & Paper Corp.	GB 222
The United Co.	MH 11
U. S. Bottlers Machinery Co.	MH 35
U. S. Electrical Motors, Inc.	MH 116
U. S. Steel Company	GB 257
Urschel Laboratories, Inc.	MH 3
Vaughan's Seed Co.	GB 239
Wallace & Tiernan Co., Inc.	MH 110
Lansing B. Warner, Inc.	GB 244
Washburn-Wilson Seed Co.	GB 214
Waukesha Foundry Co.	MH 48
Weston Electrical Instrument Corp.	MH 20
White Cap Co.	GB 250
F. H. Woodruff & Sons, Inc.	GB 245


1 FOOD MACHINERY & CHEMICAL CORP
2 W F & JOHN BARNES CO. JAMES DOLE ENGINEERING CO.
3 URSCHEL LABORATORIES, INC.
4 CHISHOLM-RYDER CO. INC.
5 A K ROBINS & CO
6 MORTON SALT CO. SCIENTIFIC SALTING CO.
7 THE CROWN CORK & SEAL COMPANY
8 BARRY-WEHMILLER MACHINERY CO.
9 DUDLEY MACHINERY CO.
10 MOJONNIER BROS. CO.
11 THE UNITED COMPANY
12 BUFLOVAK EQUIPMENT
13 THE FILLER MACHINE CO.
14 ELGIN MANUFACTURING CO
15 TRI-CLOVER MACHINE CO.
16 TAYLOR INSTRUMENT COMPANIES
17 COLUMBIA ENGINEERING SERVICE CO.
18 FAWICK AIRFLEX CO.
19 J. L. FERGUSON CO.
20 WESTON ELECTRICAL INSTRUMENT CORP.
21 REEVES PULLEY CO.
23 W. J. FITZPATRICK CO.
24 PRODUCTIVE EQUIPMENT CORP.
25 CREAMERY PACKAGE MFG. CO.
26 NEW JERSEY MACHINE CORP.
27 CANNERS MACHINERY LTD.
28 ECONOMIC MACHINERY CO.
29 ELECTRIC SORTING MACHINE CO.
30 WALKER-WALLACE, INC.
31 FRANK HAMACHER MACHINE CO.
32 BURT MACHINE CO.
33 HUNTLEY MFG. CO.
34 THE FOXBORO CO.
35 U.S. BOTTLERS MACHINERY CO.
36 LINK-BELT CO.
37 LEE METAL PRODUCTS CO.
38 MORIE MANUFACTURING CO.
39 STANDARD-KNAPP, DIV. ENTORY MANUFACTURING COMPANY
40 ACE SPECIALTY MANUFACTURING CO.
41 MINNEAPOLIS-HONEYWELL REGULATOR CO.
42 GEO. J. OLNEY
43 ALUMINUM COMPANY OF AMERICA
44 THE PFAUDLER CO.
45 CHAIN BELT CO.
46 TOWMOTOR CORP.
47 THE BARKER CO.
48 WAUKESHA FOUNDRY CO.
49 AMERICAN MACHINERY CORP.
50 BALDWIN-LIMA-HAMILTON CORP.
51 A.S.C. PACKAGING MACHINE CORP.
52 BERLIN CHAPMAN CO.
53 ALUMINUM COOKING UTENSIL COMPANY
54 ACME STEEL CO.
55 ANGELUS SANITARY CAN MACHINE CO.
CM&SA EXHIBIT OFFICE
EXHIBIT SUPPLIES
N
MACHINERY HALL
CONRAD HILTON HOTEL
CM&SA EXHIBIT - FEB 21-25/1953
SCALE 0' 8' 12' 16' 20'
1/16" = 1'



MACHINERY HALL ANNEX & FOYER

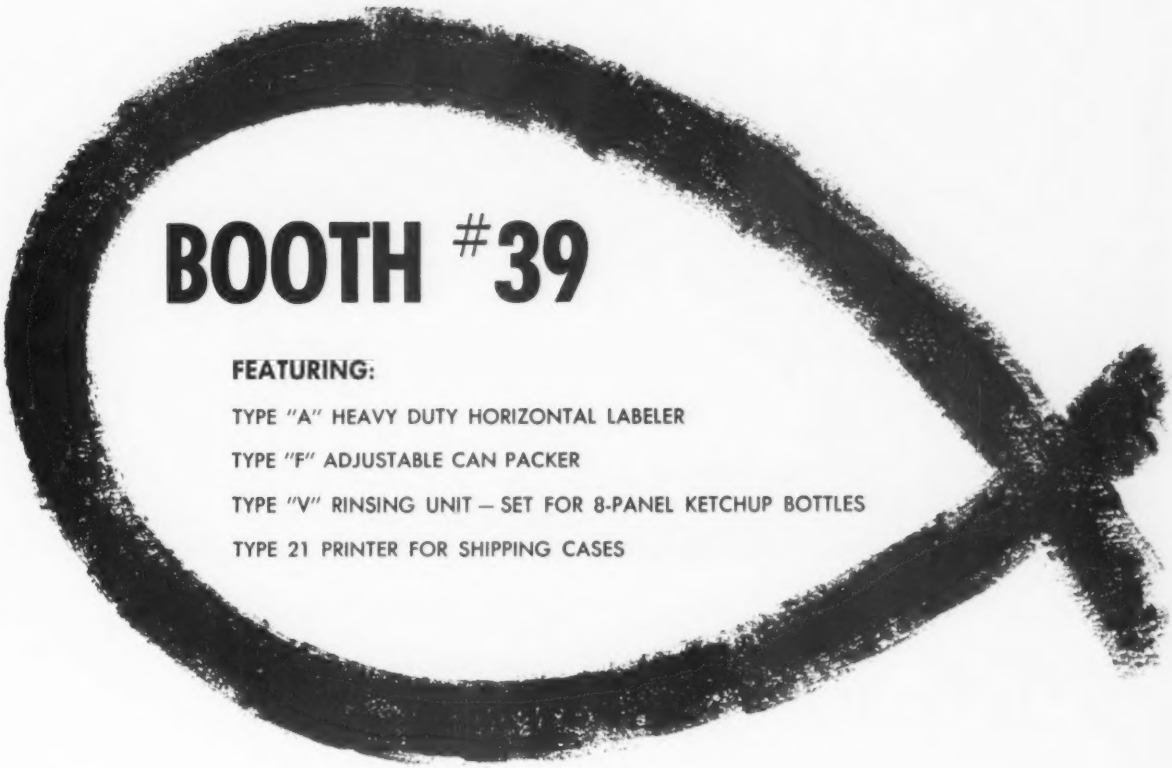
CONRAD HILTON HOTEL

CM&SA EXHIBIT FEBRUARY 21-25, 1953.

FOR MORE EFFICIENT PACKAGING METHODS

DON'T MISS STANDARD-KNAPP

CANNERS' CONVENTION EXHIBIT



BOOTH #39

FEATURING:

TYPE "A" HEAVY DUTY HORIZONTAL LABELER

TYPE "F" ADJUSTABLE CAN PACKER

TYPE "V" RINSING UNIT — SET FOR 8-PANEL KETCHUP BOTTLES

TYPE 21 PRINTER FOR SHIPPING CASES

PREFERRED BY COMPANIES FOR WHOM

Only the best is good enough

FOR CAN LINES—STANDARD-KNAPP PROVIDES

UNLOADERS • CONVERGERS • DUMPERS • UNSCRAMBLERS • LABELERS
BOOSTERS • PACKERS • PALLETIZERS AND DE-PALLETIZERS
CASE GLUERS AND SEALERS • PRINTERS AND STAMPERS

FOR GLASS LINES—STANDARD-KNAPP PROVIDES

UNLOADERS • UNSCRAMBLERS • PACKERS • CONVERGERS • RINSERS
CASE GLUERS AND SEALERS • PRINTERS AND STAMPERS

STANDARD-KNAPP

DIVISION OF EMHART MFG. CO.

PORTLAND, CONNECTICUT

INTRODUCING

two wonderful new white-seeded green beans for processing . . . companion lines to our well-known Kinghorn Special Wax Bean.

J. H. Woodruff SEEDS

WOODRUFF'S HYSCORE

A new white-seeded round bean developed by our Mr. George W. Skirm, and bred especially for the canning and freezing industry.

Pods are 6"-6¼" long x ⅜" in diameter, very straight, and are dark green in color. Stringless and fiberless.

The vigorous plants are very erect in habit, with a concentrated set of pods borne high on the bush, making the variety adaptable to mechanical harvesting.

The plant matures its pods very uniformly. Approximately 85% of the maximum yield can be obtained at one harvest without an excess of 4 sieve beans.

The frozen product will not bleach in storage. Liquor is clear and colorless in the canned product. Matures in approximately 58 days. Seed is white with light brown eye.

AVAILABLE FROM 1953 CROP

KING GREEN

Another white-seeded, nearly round green bean, also developed by our Mr. George W. Skirm. This bean is well adapted to baby food processing.

Pods are approximately 7" x 3/8", nearly straight, meaty and succulent. Dark green as Topcrop in color, and will not bleach prematurely on the vine.

Plants are moderately tall, broad and slightly spreading in habit. Pods are borne high enough to clear the ground. Yield is equal to, or greater than, that of Tendergreen. Matures in approximately 55 days.

The processed product has an attractive green color, and is free of colored specks from macerated seed skin commonly found in the product of other varieties. Seed is white with small tan dot-eye.

AVAILABLE FROM 1953 CROP

Greetings NCA *Members!*

We'll be glad to see you at Booth 245 — in the foyer, just outside the main ballroom at the Conrad Hilton.

F. H. Woodruff SEEDS

F. H. WOODRUFF & Sons, Inc.

Seed Growers

Milford, Conn., Bellerose, L. I., Salisbury, Md., Atlanta, Sacramento, Dallas, Mercedes, Tex., Toledo

Canner's Acreage

There's no magic formula for getting all the good canning acreage desired. Trained fieldmen, well-written contract, hard work & fair play have proved successful for Green Giant Company.

Here's how Green Giant gets its acreage for processing crops

Integrate these crops into grower's farm program, provide adequate services, well-trained fieldmen, and a generous share of good will & fair play, and you'll get the acreage

CONTINUED MAXIMUM YIELDS of high quality canning crops as an integral part of a progressive long range program, safeguarding the permanent productivity of the soil and providing a fair return to the grower, are the basis of the grower-processor relationship of the Green Giant Company.

Canners are often concerned with the problem of obtaining sufficient acreage. They ask, "What methods of persuasion can fieldmen use to convince farmers that they should raise more canning crops," or, "What can a fieldman tell a livestock farmer as to the specific means by which peas, sweet corn or other canning crops may be incorporated into his farming program and which will give a fair return for his time and investment." How can one overcome arguments advanced by farmers that they are short of help, the young folks don't want to stay on the farm and work, or we need the land for other crops which appear to be more profitable than canning crops?

The Green Giant people will be quick to inform you that to obtain all the good acreage required annually has not been a result of any magic formula or high pressure salesmanship on the part of the Company's field staff. Austin J. Hayden, field superintendent of the Minnesota Division, states that only through continued year-around hard work, over many years, by the local field departments has the company been able to obtain its required acreage on high producing land.

Early in the company's development, the management of the Green Giant Company recognized that the price they paid the grower was not the only factor that determined the farmer's net return and his willingness to grow canning crops. Rather, it was felt that the grower's net return resulted from price, multiplied by yield, minus the tangible and intangible costs of producing that crop. Therefore, to provide for increased yields and minimum costs, inconvenience, and risk, the company is working from five different aspects. These include intensive agricultural research, detailed crop production records, improved grower services, improved contracts with the grower and, finally, an adequately trained year-around field staff.

Research a factor

Agricultural research has long been a big factor in fulfilling these goals. This is carried out under the general direction of Dr. E. C. Ritchell, with J. D. Barnard having charge of the corn breeding program and G. P. Radebaugh managing the seed breeding work. Through the development of high yielding varieties with improved plant characteristics, the grower has been able to realize a higher net return while his field operation costs have been reduced. Detailed research studies on the various factors which affect canning crop production have produced the main tools with which the fieldmen have to work in selecting land and advising growers.

Production records kept

Extensive crop production records compiled by the company's crop control department under the direction of Robert M. McLaughlin provide a continuous flow of valuable information regarding the factors of crop production and their relative effect and importance in the various growing areas in which the company operates. More than 50 crop information items are tabulated for every grower's field. Following are two factors to cite examples as to the use of this information. Maturity rating, the first of these, is used to provide not only for a better planting schedule, but also to recommend to the grower the proper variety and planting time for his particular field. Yield rating, the second of these factors, divides the grower's yields into five brackets, A, B, C, D, and E, according to yield. This rating considers both time of planting and variety. Through the use of these ratings, accumulated over many years, it has been possible for the company to concentrate in better growing areas and to obtain the better fields from the higher producing farms in those areas. Every effort is made to maintain the acreage with the highly

INTRODUCING A Brilliant Newcomer!

Prosperity

MAIN CROP

HYBRID SWEET CORN

***Outstanding* for**

HIGH YIELD

with strong two-ear heavy producing tendency.

ATTRACTIVE APPEARANCE

with dark green husks and flags, light interior silks, bright yellow kernels. Husked ears are 8 to 8½ inches long, with 16 rows of deep narrow kernels.

FLAVOR AND TENDERNESS

with long holding ability which enables it to remain tender and sweet for many days.

Three years' extensive field trials by Corneli experts and by market growers, shippers, canners and freezers in the United States and Canada have proved the superior quality of this new hybrid. Other outstanding features are resistance to wind and lodging . . . protection of ears by tight husk with good tip coverage . . . adaptability to mechanical or hand harvesting . . . uniform maturity and good holding ability. Prime edible stage is usually reached 83 days after planting or about in season with Golden Cross.

And for an Early Harvest, the Ever Popular ®

CORNELI'S GOLD RUSH

This profitable, widely-used early hybrid matures about 10 days before the new "Prosperity," providing an extended harvest period when the two are planted together. Favored by market growers, shippers and canners for its earliness along with full size, uniform ears (8½ inches long, 12 to 14 rows), attractive appearance and exquisite flavor.

CORNELI KEYSTONE SELECTED CLEANED TESTED SEEDS

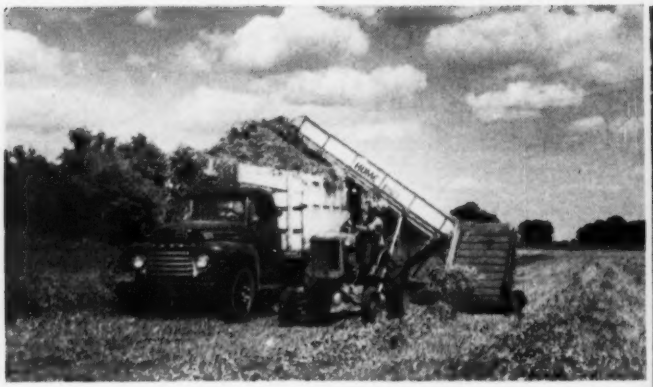
SEEDS SINCE 1845

PLACE YOUR ORDER NOW FOR THESE TWO FINE CORNELI HYBRIDS

CORNELI SEED CO.

Breeders and Growers

SAINT LOUIS 2, MISSOURI



◀ Green Giant will plant, cultivate, and harvest the crop, if the grower desires. The company prefers to do harvesting so that the crop comes in at the "fleeting moment" of just the right maturity—a Green Giant hallmark.

Soil samples are collected by the fieldman, analyzed, and recommendations made without charge to the grower. The company also finances grower's fertilizer purchase until the grower receives payment for crop, if desired. ▶

rated growers, while the mediocre growers are advised as to how their yields may be increased. As conditions permit, the growers with continuous low yield ratings are not contracted.

Service is goal

The third goal of this program is toward expanded service to the grower. The primary objective is to provide those services which are not easily obtained elsewhere, and then only at great risk and inconvenience. Beginning with the soil, Green Giant maintains its own laboratories for complete soil analysis as well as a study of the possible pea-disease potential. The samples are collected by the fieldman, analyzed, and recommendations made for fertilization. This is all done without charge to the grower. To further the use of fertilizers, and to make certain that the grower may obtain the proper analysis and type, the company agrees to finance the grower's fertilizer needs, without interest charge, until the grower receives payment for his crop. The grower may choose his own fertilizer dealer and time of delivery.

Service to growers also follows through in the planting, cultivation and harvesting of the crops. The company provides fertilizer drills and cultivating equipment for peas—plates for corn planting—and especially designed equipment for harvesting the crops. In other words, the grower need only to prepare the soil, plant the crop and perform the necessary cultivation. The company prefers to do the complete harvesting job so that they may bring the crop in at the "fleeting moment" of just the right maturity (see FOOD PACKER, October 1952).

For the convenience of their growers who feed sweet corn silage, the company has recently designed and put into operation a special corn silage loader. Although there is a small charge for this service, almost all the growers take advantage of it since it eliminates a lot of back-breaking work and saves waiting in line. It makes possible the loading of a truck in ten minutes rather than two hours.

Inspection and treatment for insects is carried out completely by the company. All corn borer spraying and second treatment for pea aphids is done at company expense. Only the first treatment for pea aphids is charged to the grower.

Improving the grower's contract is the fourth objective toward which the company is continuously striving. Examples of recent contract changes and /or additions include a provision for the payment of a bonus for late planting of peas. This is aimed at compensating the grower for the greater risk involved with the later plantings.

In the case of sweet corn, compensation to the growers for its production is tied to an escalator clause which establishes a relationship between the price of sweet corn and field corn. Table 1 is taken from the 1952 Green Giant corn contract for the Minnesota division and shows how the price was established that year.

Table 1.—If the average price per bushel received by Minnesota farmers for field corn as determined and reported by the Crop Reporting Board of the U. S. Department of Agriculture, as of December 15, 1952, is more than $1.39 or less than $1.35, the compensation per ton (as listed in compensation schedule in the contract) shall be increased or decreased, as the case may be, according to the following schedule:

Average price per bushel of field corn, 12/15/52	Increase per ton of sweet corn	Average price per bushel of field corn, 12/15/52	Decrease per ton of sweet corn
$1.40 to $1.44	$ .50	$1.30 to $1.34	$ .50
1.45 to 1.49	1.00	1.25 to 1.29	1.00
1.50 to 1.54	1.50	1.20 to 1.24	1.50
1.55 and up	2.00	1.19 and down	2.00

Need alert field staff

The fifth and a most important factor is the maintaining of an alert and capable field staff at the local cannery. Without this type of person to act as the liaison man between the company and the grower, many of the advantages gained by agricultural research, crop production records, grower services, and improved contracts would be of little value. These men are, not only experts in the crop production of peas and sweet corn for canning, but they are also trained in good agriculture generally so that they may be able to intelligently discuss other phases of farm management with the grower.

The fieldmen have a crowded work schedule the year around. Immediately after the crops have been harvested, they contact each grower and discuss with him the financial statement re-

A NORTHRUP KING NK BULLETIN

Seed Service

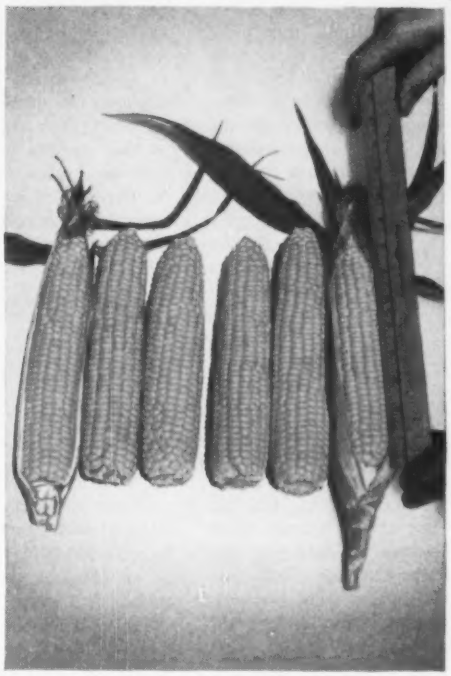
ANNOUNCING NEW, EARLY SWEET CORN

Golden Princess excels in both field and factory

A true hybrid in the Tendergold maturity, Golden Princess is an outstanding newcomer for 1953. Tested as Hybrid #9556, it gave good field performance, showed wide adaptability and handled well in canning. Its percentage of cut is good.

Maturity—five days to a week earlier than Golden Cross N. C. Plant—6 to 6½ feet, with large, dark green leaves.

Try this new NK hybrid, Golden Princess, in '53. Ask your Northrup King representative for the complete story, or write to us today.



Excellent quality in a large, well filled ear is characteristic of Golden Princess.

Scientific selection and breeding are responsible for constant improvement in Northrup King strains.

Scientific testing of purity, vigor and germination helps to insure more uniformity in Northrup King seeds.

Seed science serves you at

NORTHRUP KING

NK

NORTHRUP, KING & CO. • MINNEAPOLIS 13, MINNESOTA

garding his returns and costs. If any discrepancies arise, they are immediately corrected before the growers' checks are issued. Later in the fall, they contact the growers again to discuss his farming plans for the coming season. If a satisfactory field can be selected for the growing of canning crops, in line with good farm management, a soil sample is then taken of that field and the grower signs a preliminary acreage survey form. During the few months that remain before contracting begins, these men visit growers to advise them on such items as improved crop rotation and seedbed preparation, and the making of fertilizer recommendations based on the analysis of the grower's soil sample. Mainly, however, these men concentrate on study and training during this non-crop production period.

The training program has several phases. First, the fieldmen make a thorough analysis of all the information released to them by the company's tabulated crop production records to discover means whereby yields may be increased by better husbandry or by better land selection. Next, the latest information concerning the production of peas and corn is presented to them by members of the Agricultural Research and Production staffs. Finally, they are brought up to date on other phases of agriculture by reviewing the latest Agricultural Extension Bulletins, data from farm management services, and any new text books on related fields of agriculture.

Following this training and study, the fieldmen make one more visit to the farmer which is the climax to all their efforts since the completion of the previous pack. At this time, he will again review with the grower recommendations for better production and discuss with him the provisions of the new contract. If the fieldman is satisfied with the grower's plans for the production of the particular canning crop, and the grower is satisfied with the provisions of the acreage contract, it is then signed for the new year.

Integral part

The Green Giant Company is not interested in obtaining acreage alone, nor do they wish to "sell" a contract to a grower whose chances of obtaining a fair net return are not good. Rather, the company operates on the principle of making the growing of canning crops an integral part of the growers' entire farming operations—one offering reduced risks and fair returns—and promoting the many advantages of continuing as a Green Giant grower. It is felt that when such a program is followed and where the facts are placed squarely before the grower, the problems of contracting acreage can be considerably reduced. Further, by placing the services of an adequately trained fieldman at the *disposal* of the grower, the grower will be able to carry out a program of self help whereby he maximizes his net return from canning crops and improves his entire farming program.

Edward B. Cosgrove, president of the Green Giant Company, stresses that grower-processor relations are an important cog in the overall operation of the company. "We can't operate without our growers," he says, "and we attempt to conduct these relations so that we can pack products of consistently high quality year after year. Moreover, we want to play fair and square with our friends, the growers. Also, we want to see that our soil —certainly our most valuable resource —is properly safeguarded and remains highly productive."

Success of mechanical snap bean picker seen

There is general agreement in agricultural and canning circles that "the long-sought principle" for development of an efficient mechanical snap bean picker has been found, Roy Fortier, Atlantic division agronomist for American Can Company, reported.

He said, however, that the eventual success of the snap bean picker will depend on certain mechanical modifications in the machines and further developments in plant breeding.

Explaining the operation and use of the Chisholm-Ryder picker, Mr. Fortier said that one of the most important characteristics of bean plants well adapted for mechanical picking is that they produce the bulk of their beans for a single harvesting. The reason for this, he said, is that damage to the plants prevents further practical growth.

He said field trials indicate that from a standpoint of high yield and picking efficiency the Tendergreen and Wade varieties of green beans have proved most adaptable to mechanical harvesting. Other types that have been successful in field trials are Asgrow Stringless Green Pod and Tenderlong 15.

Damage to mechanically picked beans is slight, Mr. Fortier said, adding that development of methods for defoliating the plants probably will increase the efficiency and capacity of picking machines.

CANNING

(Continued from page 29)

inclining metal bucket conveyor that takes the ears to the third-floor cutting room in an adjoining building.

From the cutters the corn to be made into cream style moves through Link-Belt screw conveyors to the battery of six silkers on the floor below. Screw conveyors again take the corn from the silkers and discharge it into two large FMC batch mixers where salt, sugar, and starch are added and the temperature is brought up to 180° F. From the mixers, two Blackmer corn pumps take the mixture to the blending mixer back on the top floor where it is thoroughly mixed and blended and the temperature is further increased to 190° F. The mixture then flows by gravity into two DeZurik consistency regulators where extra syrup is automatically added to produce the required consistency. "Chet" Fisher, general factory superintendent, praises these regulators and says they are far more accurate than humans in maintaining the required consistency throughout the day.

Next, the mixture goes to the final blending tank. This tank, equipped with Taylor automatic controls, maintains a constant filling temperature of 190° F. as the product flows by gravity into the four FMC high-speed, 10-pocket fillers. American Can Co. furnishes the cans and closing machines.

The Busse system is in use for loading and unloading crates. Company officials like this system because retort and cooler capacity is put to better use and there are fewer dented cans. Thirty-two new FMC vertical retorts and 20 horizontal-type retorts are used in the Hoopeston plant. Crates are handled in the retort room with Robbins and Meyers self-propelled electric hoists. A Cook-check tag is attached to each crate to indicate whether it has been in a retort.

The cooling tank, more than 130 feet long, is the largest ever built by the Food Machinery & Chemical Corp. It accomodates two lines of retorts, each line with an individual drive, so that large and small cans can be cooled at the same time. A year ago Chet Fisher improved the efficiency of this tank by installing a mechanism that agitates the water. A pump picks up cool water from the bottom of the tank and pumps it through a four-inch discharge line that lies on the tank floor. This line has one-half inch holes bored in it every three feet. The pump

(Continued on page 87)

DROUTH RESISTANCE

Plus

HOLDING POWER

In The Field . . . Equals

TENDERMOST

If you recall, the latter half of the 1952 season was very hot and dry and many sweet corn hybrids failed to hold in the fancy stage. TENDERMOST, being DROUTH RESISTANT and having LONG HOLDING POWER, came through as usual—FANCY CORN!

Will 1954 Be HOT and DRY?

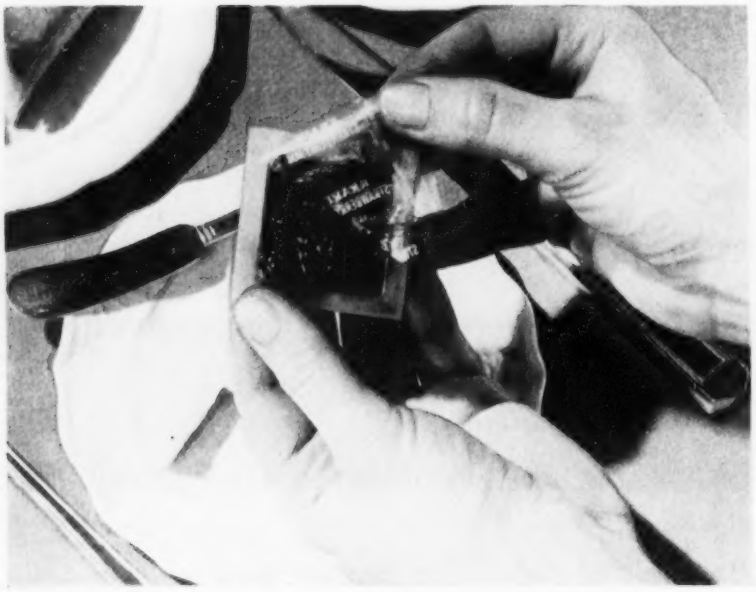
INSURE AGAINST THIS; PLANT TENDERMOST

Michael-Leonard Company

SIOUX CITY 6, IOWA • FULL LINE OF CANNERS' SEEDS • CHICAGO 16, ILLINOIS

Production Lines

New methods • New research



New plastic packages for individual servings of jellies and jams introduced by Kraft Foods Co.

A revolutionary development in institutional food service—Portion Control—has been started by the Kraft Foods Co., Chicago. This development offers low cost, labor-saving inventory control and quality sanitation in individual food portion packaging, the company says.

Jellies, jams and cranberry sauce are now packed in individual plastic servings—Vinylite plastic—and Kraft officials believe the line may include in the near future a long list of foods, from appetizer through dessert.

Production facilities have been set up by Kraft in Chicago, but prospects are that several other Kraft manufacturing plants will get such installations soon. Kraft has arrangements with the Bakelite division of Union Carbide & Carbon Corp., manufacturer, for production of Vinylite to supply materials for the new package, on which patent applications are pending.

The jellies and jams are packed in three-quarter ounce sizes, while the cranberry sauce is packaged in one ounce sizes. Vinylite is thin, light in weight, yet durable and fully protective, the company says. It is a solid plastic, semi-opaque and designed for one-time use only.

Kraft officials announced that several years of research and experimentation went into the perfection of the machinery, facilities and methods used to produce and fill the new package. They added that there is almost no limit in the sizes and shapes that can be produced in the completely automatic operation. Portion Control packages may be lightly or tightly sealed. The closure has an overflap that extends beyond the edge of the package to permit easy removal of the cover by the consumer.

Although the development so far has been in the institutional food field, the company believes the package might be a big seller in the consumer field as well. Kraft says that many users report reduction of kitchen labor costs and reduction of waste in filling jellies and jams, positive inventory control, improved quality through sealed packages, and a strong "plus" in customer reaction.

Salad dressing production increases in volume

Commercial production of salad dressing, mayonnaise and related products in the United States rose in volume to 97,200,000 gallons during 1951, according to the 24th annual industry survey conducted by the Department of Commerce under sponsorship of leading members of the industry and the Mayonnaise and Salad Dressing Manufacturers Assn. Production was 94,600,000 in 1950. For the fourth consecutive year, the consumption of commercially prepared salad dressing products was maintained at double prewar level.

Anti-freeze solutions in new role in food laboratory

Anti-freeze solutions are helping University of California food technologists find out what happens to frozen foods during storage, and find the processing methods and storage temperatures that will insure high quality frozen foods for the consumer.

Aloys L. Tappel, in the department of food technology on the University's Davis campus, is extracting enzymes which bring about deterioration of frozen fruits and vegetables. He then mixes them with anti-freeze solutions to study chemical changes in foods below freezing temperatures.

"Accent" scores hit in frozen products

A preference for frozen vegetables seasoned with "Accent" over the same vegetables frozen without "Accent" was revealed in a 10-month period of taste-panel testing, according to Amino Products division, International Minerals & Chemical Corp., Chicago.

The company said that the longer vegetables frozen with "Accent" stand in storage, the better they taste in comparison with those frozen without it. Amino believes these tests point to the extensive use of the seasoning by frozen food processors.

Scientists study color change in frozen peas

Certain enzymes that are active even at extremely low temperatures have been identified as causing the loss of color in frozen green vegetables, particularly peas, according to scientists at the New York State Experiment Station at Geneva.

Changes in chlorophyll due to these enzymes are either greatly delayed or

(Please turn the page)

Built to Last...

THE LAST WORD IN STRIP FEED PRESSES

STURDY CONSTRUCTION

Welded steel frame . . . far stronger than rating . . . maintains perfect alignment without tie bars . . . no sliding members in brake or friction clutch.

HIGH SPEED PRODUCTION

Up to 300 strokes per minute with multiple dies . . . at least one hour production run without reloading magazine.

LOW MAINTENANCE

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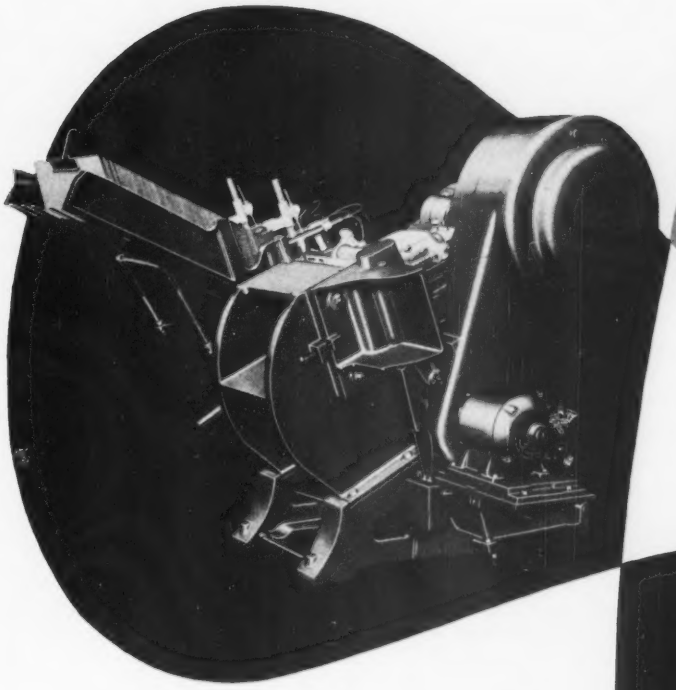

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(Continued from page 82)

prevented completely by blanching peas before freezing, the scientists said. Even after prolonged storage the blanched peas showed no loss of chlorophyll while raw peas showed an appreciable loss.

First standards for grades of frozen succotash proposed

The U. S. Department of Agriculture proposed for the first time standards for grades of frozen succotash. The proposed grades would be designated as U. S. Grade A or Fancy; U. S. Grade B or Extra Standard; and Substandard. Respective ratings for color, absence of defects, and tenderness would be considered.

NAFFP reports 1952 pack of frozen peaches

The 1952 pack of frozen peaches amounted to 33,662,932 pounds, according to a preliminary tabulation of the National Association of Frozen Food Packers. The 1952 total is slightly larger than the 32,380,150 pounds packed in 1951 and well above the volume packed in any year since 1946.

The pack in the West continued to represent about two-thirds of the total. The western, southern and northeast pack declined slightly from 1951, but the midwest pack more than doubled.

New orange powder developed by USDA stores well

A new process for the manufacture of powdered orange juice yields a product that stores well under severe conditions and makes an attractive, fresh-flavored beverage when reconstituted with water, according to the U. S. Department of Agriculture.

The Army Quartermaster Corps has procured a small trial supply for testing purposes, but the new product is not yet available commercially.

New fish freezing plant under construction in Newfoundland

Construction has begun on a million dollar processing and freezing plant in Newfoundland to increase the types of seafoods available for sale under the SeaPak trade name, it was announced by officials of SeaPak Corp., St. Simon's Island, Ga. The plant is expected to be finished in June.

Approximately 75 tons of ocean fish per day will be required for capacity operation at the plant and production is expected to run from eight to 10 million pounds of packaged products a year. J. O. Hice, J. Roy Duggan and Benjamin O. Johnson, SeaPak officials, were elected to direct the new company.

1952 crop picture from USDA figures

U. S. Department of Agriculture figures show that the 1952 harvested acreage of 11 vegetables grown for processing in the United States totaled 1,807,050 acres compared with 1,867,990 acres harvested in 1951, and compared with the average of 1,841,320 acres for the preceding 10-year period. The 11 vegetables are: asparagus; lima beans; snap beans; beets; cabbage; sweet corn; cucumbers for pickles; peas; pimientos; spinach; and tomatoes.

The 1952 value of these 11 crops is $273,427,000, and is 12 percent lower than the 1951 value of $309,646,000, but is 42 percent above the average for the preceding 10-year period of $192,297,000.

On a tonnage basis, the 1952 production totals 6,549,000 tons, which is nine percent less than the 1951 production of 7,215,000 tons, but 20 percent above the 1941-50 average of 5,447,100 tons.

U. S. standards for grades of canned mushrooms revised

The U. S. Department of Agriculture announced a revision of U. S. standards for grades of canned mushrooms. The revised standards will supersede those in effect since May 15, 1941. "Sliced whole" and "sliced button" mushrooms have now been included as separate styles.

1952 tomato pack reported by NCA

The 1952 pack of canned tomatoes totaled 25,176,437 actual cases, nine percent below the 1951 pack of 27,672,399 cases, according to a report by the National Canners Assn. division of statistics.

California led all other states with a 28 percent larger pack than in 1951, despite a 20 percent reduction in the tonnage of tomatoes for processing in that state. Last year's leading packer of whole tomatoes, Maryland, was almost four million cases behind California in 1952. California's pack accounted for 38 percent of the nation's total, and California and Maryland combined accounted for over 60 percent.

College Inn introduces chutney

College Inn Food Products Co., Chicago, has taken over the manufacture and sale of Calcutta Club chutney, formerly packed in New York, and is handling it in conjunction with its regular line of products.

College Inn has redesigned the label and is departing from traditional chutney packaging in offering Calcutta Club in an eight-ounce jar with a wide-mouth opening. This facilitates spooning out the product, the firm says, and overcomes consumer objection to the old-style, narrow-mouth bottle.

Calcutta Club is an authentic East Indian chutney recipe, consisting of imported mangoes, lime juice, ginger, raisins, vinegar, apples, and condiments. Owens-Illinois supplies the jars; Independent Lithograph Co., San Francisco, manufactures the labels.

NAFFP issues booklet

A booklet issued by the National Association of Frozen Food Packers entitled "Protecting frozen foods from producer to consumer," sets forth detailed recommendations for all types of frozen food handlers.

Prepared in two colors with attractive art work, the booklet is a reminder to all factors in the industry that frozen foods require constant protection of 0° F. refrigeration to maintain high standards of quality.

Quantity copies of the booklet are available to all members of the trade at cost of printing. Inquiries should be directed to the National Association of Frozen Food Packers, 1415 K St. N. W., Washington, D. C.

Display stand for chili sauce

A unique wooden display stand, typifying the "homemade" atmosphere long associated with Bennett's chili sauce, has been offered for use in groceries by Recipe Foods Inc. of Baltimore, manufacturers of the product. Constructed in the shape of a crescent, this floor-type stand will display seven dozen jars of Bennett's chili sauce, and has storage space for several cases in the back. Attractive rustic lettering on the wood provides instant product identification.

NEWS
about PRODUCTION
IMPROVEMENTS...

Visit
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at the Convention
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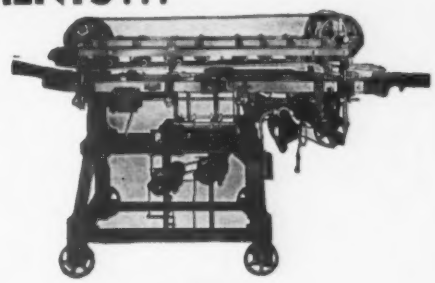
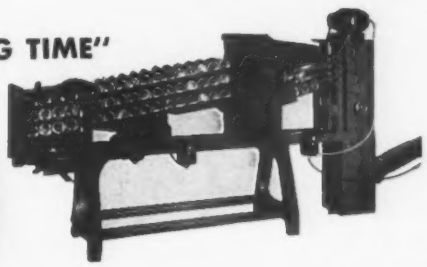


"BURT BEATS FLEETING TIME"



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(Replacement parts always carried in stock for prompt servicing.)

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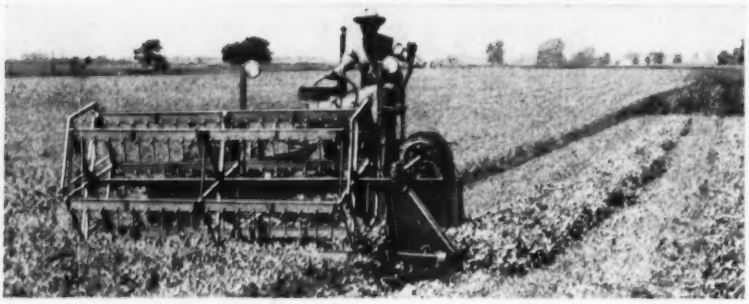

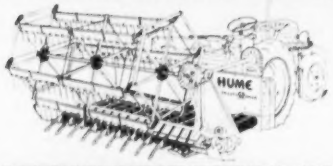

HUME TRACTOR-ROWER Light weight Hume Tractor-Rower cuts a wide swath at high speed and windrows the crop neatly, gently, without shattering, twisting, roping.

Harvest Insurance!

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Even under SEVEREST conditions — as long as you can haul vines from the loader this Hume harvesting team will cut and windrow, and load, the crop — cleanly, quickly, completely, gently. That's real insurance against harvest loss. Write for literature.

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HUME LOADER Light weight, high speed Hume Loader picks up all the crop — loads vines in loose, fluffy, clean condition — easy to pitch at the viner.

KERR

(Continued from page 12)

to feel bad. An odd manner of getting "permission," any way you take it.

Those two sections in the law that cross each other up were not the results of oversight or a slip of the pen. So this page is told. It seems the legislative drafting officers got scared by the fourth amendment to the Constitution; the one that says the right of the people to be secure in their persons, houses, papers and effects, against unreasonable searches and seizures, shall not be violated. It was the effort to walk wide of this provision in the Bill of Rights that caused the draftsmen to put in that clause about permission. And because the inspectors really had to get in, if the law wasn't to be a powder-puff affair, the draftsmen added the stuff about the jail and such.

Supreme Court decision

No court has found a way to make these things look in the same direction. The district court found the Doctor guilty under the law; explaining that this would be necessary in order to get a constitutional reading of the Act by appellate courts. The Supreme Court said F&D might be right in saying the inspectors had to do their inspecting in the plants; that if they couldn't get in, the sanitary provisions of the law couldn't be enforced. But the court added that it had had no luck trying to make anything reasonable out of those contradictory clauses, so it suggested some corrective surgery by Congress. Or words to that effect.

Congress will be asked to operate and it's rather probable, though not a sure thing, that the Hill may oblige. However, some want of alacrity is showing up among the Solons; some feel that it isn't a good idea to give an agency too much authority. That could be right serious for F&D; giving it a job to do in protecting the public against adulterated or—not to put too fine a point on it—filthy food, and then withholding the tools the agency thinks it must have to accomplish the purpose. Commissioner Crawford, of F&D, has said that a good many manufacturers and distributors have volunteered help in getting remedial legislation through Congress. So we'll hope that in some suitable way the industry can produce certified foods without getting balled up in the fourth amendment.

(Continued from page 80)

action drives the water out through these holes, causing remarkable agitation and turbulence. In addition, 200 gallons of fresh water per minute are added to the tank. Emil Cassidy, American Can Co. technologist, told Fisher that this system is equivalent to lengthening the cooling tank by 45 feet.

Water for plant operations is supplied by two deep wells. Waste is collected in a deep sump from where it is pumped one and one-fourth miles to a lagoon located in a 60-acre field owned by the company. Sweet-Aire odor control compound was used in the lagoon for the first time in 1952 and the results were very favorable, according to Fisher.

Quality control, under the supervision of Robert G. Thomas, is considered an all-inclusive operation at the Illinois Canning Co. Representative samples of the previous day's corn pack are cut each morning and are inspected and evaluated by management and supervisory people. Thomas closely checks weight, vacuum, head space, color, consistency, maturity, flavor, and over-all appearance of each sample.

In addition, he works closely with field men on determining maturity of the corn before harvest. He also is responsible for seeing that all cutting and trimming operations, processing temperatures, and in fact, all in-plant processes are operating properly. Here is a fine example of a company that believes that careful control of the entire operation, from procurement of the raw product to loading the canned goods on carriers, is necessary for packing a high-quality product.

DETERGENT BOOK

DETERGENTS—WHAT THEY ARE AND WHAT THEY DO. By Donald Price, Ph.D *Published by Chemical Publishing Co., Inc., New York.* 1952. 159 pages. $4.00.

Dr. Price, technical director of Oakite Products, Inc., has brought detergents from the realm of specialized organic chemistry to the level of the average reader. In this book he explains the hows and whys of detergency in simple, nontechnical terms. Yet this is a real technical book in that it reveals the chemical nature of surface-active agents and illuminates the mechanism of their action in removing water hardness and wetting hard-to-wet surfaces.

The book discusses optical bleaches, builders and extenders. It throws light on manufacturing processes and important applications of detergents. It should interest not only chemists, students, salesmen, purchasing agents and industrial users of detergents, but also the housewife.

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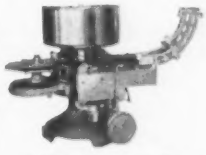
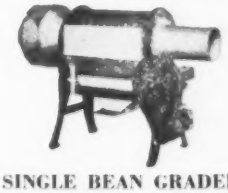

LIQUID FILLER

UNIVERSAL FILLER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311

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They're made TOUGHER! Buffalo Conveyor Belts are made from the toughest cotton yarn available on the market. *They're woven TIGHTER* by our exclusive *Wov-In-Wear* weaving process on our own specially-designed looms. *They last LONGER!* Tougher yarns and tighter weaving naturally mean *longer life* for any Conveyor Belt. However, you never pay a premium for any Buffalo Conveyor Belt . . . just the regular established price! Yet users tell us they last years *longer*. Ask your mill supply man to show you the difference!

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Impregnated with oil resistant latex, this belt is ideal for canneries, food storage plants and machine assembly lines. Resistant to water, acids, grease and heat. White or maroon colors, this odorless, very pliable, high-tensile belt has the wear resistance that has made it a favorite with economy minded buyers everywhere.

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RECIPE FOODS

(Continued from page 32)

metered into the tanks, and all ingredients are thoroughly mixed. The mixture is pumped cold through Waukesha pumps to the two Colloid Mills. It now goes to the filler. All glass containers are blown out with compressed air and placed under vacuum to insure cleanliness. After being filled, they are capped and cased and taken to the shipping dock.

Two types of salad dressing are made at the Terre Haute plant. Bennett's Whirl-Whip is a 52-percent egg and oil dressing. The company also packs a less expensive 37-percent product. First, a cooked starch base is prepared, spices are added, and the mixture is pumped to Dixie coolers where it is cooled down to the required temperature. Next, the mixture is pumped to the premix tanks where it is added to a mayonnaise base and all ingredients are blended thoroughly. The mixture is now pumped cold through the Colloid Mills to the filling line.

Vinegar is delivered to the plant in tank cars and stored in a huge wooden vat until it is used. Likewise, vegetable oil is brought in by tank cars and stored in three storage tanks, each with a capacity of 60,000 pounds. Adjacent to the three tanks is a cooling tank where oil is cooled to 40° F. and kept in readiness for use at all times. A York compressor provides the refrigeration. Markus says that using oil of a constant temperature increases its emulsification properties.

Miss Martha J. Hendricks, quality control supervisor at the Terre Haute plant, conducts systemized quality tests on all raw and finished products and makes spot inspections throughout the plant during the day. Prune samples are taken from each incoming car and checked for count, appearance, and theoretical yield of juice. Pickle relish and pepper hulls are analyzed for acidity and Baume. Incoming tomato paste used in chili sauce is sampled in the car for weight of can, appearance, flavor, odor, taste, pH, moisture, mold count, and fragmentation. Samples of vinegar are drawn from each incoming tank car and tested for acidity. Incoming vegetable oil is analyzed for taste, free fatty acids, and peroxide values.

Samples of the finished products are brought to the laboratory at regular intervals and checked carefully. Chili sauce is tested for acidity,

weight, vacuum, appearance, and percentage of solids. Prune juice is tested for Brix, Baume, flavor, pH, and percentage of solids. Salad dressing products are analyzed for moisture, acidity, and oil content.

HEINZ

(Continued from page 27)

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to 5 in the race to solve the high cost of living. That is to say, a worker's average weekly earnings today will buy 60 percent more canned foods than could have been purchased with a week's wages in 1946.

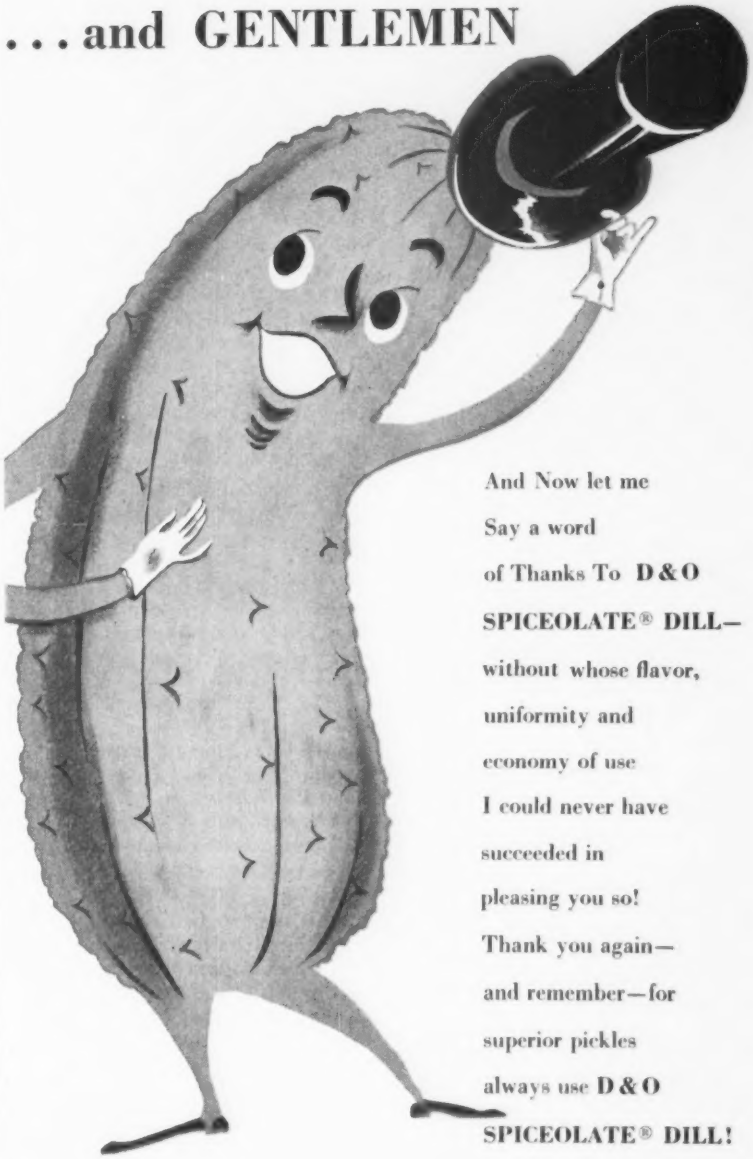
The stability of canned food prices in the face of inflationary forces was recognized by the Congress when it passed the Harrison Amendment to the Defense Production Act, last June, decontrolling fruits and vegetables. This action was taken in spite of the contention of Government price control officials that such decontrol action would result in runaway prices for canned fruits and vegetables. **Fortunately the Congress had more confidence in the operation of our economic system as it applies to the canning industry than the Government officials entrusted with the price control program.** That confidence has been justified by the record. At no time since decontrol have the prices of canned fruits and vegetables averaged as high as the ceilings permitted by OPS regulations in effect at the time the Harrison Amendment was enacted. Now, six months later, canned fruit and vegetable prices average about five percent below that standard set by OPS.

The Bureau of Labor Statistics report for Oct. 15, 1952, shows the index of retail prices of canned fruits and vegetables at 164.8, which is less than one and one-third percent higher than the average of June 1952, when the price control regulations were in effect. It is significant to note that the retail prices of many food items remaining under control increased more during that same period than the prices of decontrolled canned fruits and vegetables. It should, therefore, be evident to the new Administrator of Economic Stabilization that his statement of December 22 regarding the effect of the Harrison Amendment is not supported by fact.

No one can forecast at this time what the price level will be in 1953. One can, however, predict with a high degree of accuracy that the eco-

THANK YOU LADIES

. . . and GENTLEMEN



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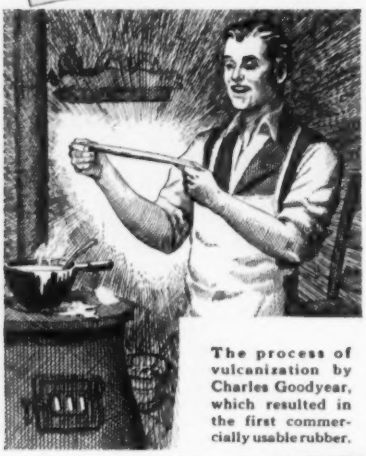
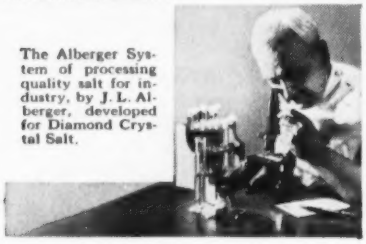


The process of vulcanization by Charles Goodyear, which resulted in the first commercially usable rubber.



The Alberger System of processing quality salt for industry, by J. L. Alberger, developed for Diamond Crystal Salt.

For over 50 years, Diamond Crystal Alberger Process Salt has been famous for its true salty flavor and better seasoning quality.

The exclusive Alberger System produces salt with a consistent purity of 99.95%—a salt that surpasses every requirement of the U. S. Pharmacopoeia. In addition, the Alberger Process makes available carefully screened salts of uniform bulk to industrial users of salt who require a definite grain size.

That's why thousands of food manufacturers who demand dependable salt of uniform purity, bulk and quality use this salt exclusively.

If you have any questions about which grain size or grade to use for best results, get expert advice by writing to our Technical Director.

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General Foods Corporation
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nomic forces that have been so trustworthy in the past will continue to operate along the same lines during 1953. This does not mean there will be no advances in prices of canned foods. There are already indications that some costs of production may be higher in 1953. The industry, however, has a good record for counteracting increased costs to some extent through improved efficiency of operations.

The National Canners Association, recognizing that the continued forward movement of the industry depends in large part on constantly striving to improve efficiency in operation, has dedicated its scientific and technological program to that end.

The highly competitive selling that characterizes the canning industry is ample insurance to the consuming public that a large part of the gains that may be effected through improved productive efficiency will be passed on to the consumer in the form of fair prices.

It is essential that the potential productive capacity of the industry be maintained so that canned food packs may be adjusted to increasing demand. The U. S. Department of Commerce estimates that expenditures for new plant and equipment items by the food processing industry in the first quarter of 1953 will amount to $154 million. This compares with expenditures of $156 million during the first quarter of 1952 and a quarterly average of $157 million for the year 1952. Thus the industry has prepared itself to efficiently supply both the continued strong civilian demand for canned foods and the needs of the nation's continuing defense program.

Bureau of Agricultural Economics reports indicate progressive increased yields per acre with improvement in quality of crops commercially processed. This has come about through better rotation practices, usage of balanced fertilizers, greater effectiveness of newer insecticides and fungicides, and more efficient utilization of labor and power by mechanization on farms. Although much was said about the late summer drought, the primary food crops, both cereals and vegetables, were harvested under conditions ideal to gather the maximum and hold field losses to a minimum. Reviving rains have fallen this winter on most all areas which were reported short of soil moisture. The approaching crop season of 1953 should not be considered out of balance insofar as the essentials of Mother Nature are concerned.

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3 leading Seed Protectants

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Outstanding Formulations for Dust or Slurry Operations

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Now, with these 3 leading seed protectants so easily available, you can always find the right formulation to fit your seed-treating equipment.

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Now, it's easier than ever to pick the seed protectant best suited for your planting requirements to insure against seed and crop loss.

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Now, you're surer than ever of getting high yields of high-grade produce for canning and packing.

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UNITED STATES RUBBER COMPANY
Naugatuck Chemical Div., Naugatuck, Conn.

producers of seed protectants, fungicides, mite killers, insecticides: Spergon, Phygon, Aramite, Synklor.

(Continued from page 52)

This new design also lends itself to merchandising in many parts of a food store. "The labels now offer grocery and meat departments a flexible merchandising tool with a variety of applications that will make for additional sales volume," Mr. Drnek said. Thus a tie-in display for a certain type of pickle might be built at the cold meat case; another type that would complement a weekend roast suggests a meat counter display; other tie-in promotions could be used with canned meats and salad dressings; or special displays of just the new label pickles could be set up.

The company, recognizing also that pickles sometimes are a planned purchase on a shopper's list, and that this shopper might very well be a youngster or a male, felt that the new label would help those confused by supermarkets select the right kind of pickle. Squire Dingee believes that their new suggestion-type labels will make shopping easier, especially in self-service markets, and will help educate shoppers in the variety of pickles and the best uses of each.

The new package was put on the market the last week of October and the company said that the reactions of salesmen and jobbers have been extremely favorable. Squire Dingee expects consumer response to be good, also. Recently the new label was announced for the first time on the half-hour Hopalong Cassidy radio program which Squire Dingee sponsors.

In 1951 the firm initiated a nation-wide campaign to find the woman who most resembled their "Ma Brown" trademark. An Iowa woman won the contest. Her prize: A 10-day Florida holiday which she turned down in favor of three days vacation in Chicago.

Three generations of Browns have headed the Squire Dingee Co. Olney Brown, past president of the National Pickle Packers Association, is now president of the firm. H. A. Brown is chairman of the board. Squire Dingee suppliers include Frazer Label Co., labels; Trio Metal Cap Co., caps; Hazel-Atlas Glass Co. and Tygart Valley Glass Co., jars.

USDA issues standards for frozen mixed vegetables

The first issue of the U. S. standards for grades of frozen mixed vegetables was released recently. These standards, which became effective December 5, include kinds and styles of basic vegetables, proportions of ingredients, and tolerances.

MORE STEAM in LESS SPACE...at LESS COST!

The Clayton Forced Recirculation Steam Generator produces more steam per pound of weight and per cubic foot of space occupied than any boiler known... and at less cost. Fast steaming, automatic and safe, the Clayton Generator sets a new standard of efficiency for the production of processing steam. It is the only steam generator with a cost curve that parallels the load demand curve through all stages of operation. Each unit... 15 to 100 h. p.... is complete, ready to connect and operate upon delivery. No burners, pumps, instruments or accessories to buy.

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LIFT TRUCKS

(Continued from page 40)

This reduces strain on engine and on the brakes.

Sometimes maneuvering into position is made easier by raising forks above load, completing the positioning, then backing off and lowering the forks.

Learn to avoid unnecessary maneuvering.

WRONG

RIGHT

To change directions in a narrow passage, always back into turn first. "Swing" of front of truck without load is shorter than tail-swing, thus with back to wall, you can change directions with less movement.

STOPPING

Always reduce speed gradually, as sudden stops are unnecessarily severe on the braking mechanism

and a sharp halt is liable to cause the load to tilt forward. It is important to learn how to make safe emergency stops.

STACKING

To tier or stack with the fork truck, drive the truck forward in the proper gear until the load arms are entirely under the load to be lifted. Make certain that the load is centered on the arms and that it is well seated against the face of the lifting carriage.

Move transmission lever to neutral and take foot off clutch. With toe of right foot on the brake pedal, accelerate the engine slightly with the heel of right foot on the gas pedal. Raise the load from the surface on which it is resting by pulling back on the tile lever. Allow tile lever to return to neutral when sufficient backward tilt of the uprights is obtained to allow safe handling of the load.

Raise load with lift mechanism. Avoid excessive back tilt when raising loads high in the air because this would place the load directly over your head.

Excessive engine speed will not increase the speed of the hoisting mechanism and will only result in excessive wear. A good operator will learn to judge by "feel" the proper speed.

When load reaches desired height, allow hoist lever to return to neutral and move truck forward to base of stack on which load is to be placed. At the beginning, it is best to lift load or release load with the tilt mechanism because the uprights are designed to raise the load slightly when tilted backward and lower it when tilted forward. However, an experienced operator can speed up an operation by using only the hoist lever.

When raising or lowering loads while standing still, do not leave truck in gear with clutch depressed; return shift to neutral and disengage clutch.

RESEARCH

(Continued from page 50)

(Fig. 1). At concentrations of 0.3 and 0.4 percent, this increase was significant at the one percent level. While the drained weights were much higher, the appearance of red raspberries when treated with aqualized gum tragacanth was slightly impaired because of a separation of the druplets. In the case of purple raspberries, aqualized gum tragacanth significantly increased the drained weights when used in all concentrations. However, as can be seen in Fig. 2, gum tragacanth was most effective in improving weights where used in concentrations of 0.3 to 0.4 percent. However, purple raspberries treated with this colloid were slightly soft and mashed.

When used with red raspberries, high methoxyl pectin was most effective when used in a concentration of 0.4 percent. At this concentration there was the greatest retention of the drained weight of the fruit. The texture was good and there were very few crushed berries.

When used in concentrations of 0.2 and 0.4 percent high methoxyl pectin was most effective in improving the quality of purple raspberries. The drained weights were very significantly higher than that of the control, and the fruit had an excellent texture. At a concentration of 0.3 percent, the purple raspberries most nearly resembled fresh fruit. At a 0.4 percent concentration the quality of the fruit was impaired because of considerable jelly formation.

Despite the fact that low methoxyl pectin was effective in increasing drained weights, low quality fruit resulted. At the lower concentrations the texture of both red and purple raspberries was soft. At concentrations of 0.3 and 0.4 percent low methoxyl pectin the red raspberries had an unnatural glazed appearance and there were lumps of clear jelly in the syrup. At a concentration of 0.3 percent, purple raspberries had the same glazed appearance. However, at the highest concentration of low methoxyl pectin used, the fruit was very dull and soft. This may have been due to the fact that at this concentration the pectin precipitated out of solution.

Color: Color measurements were made on fresh fruit, the treated and control frozen samples with a Photovolt reflectance meter. With this instrument, the lower the percent reflectance the darker the color. The added colloids were effective in retaining the color in both red and purple raspberries. A comparison of the reflectance measurements of red and purple raspberries indicates that when 0.3 added colloids were used, the color of the treated fruit is approximately that of the fresh fruit. The color of the red raspberry control was over 16 percent lighter.

While the difference is not as great with purple raspberries, the control samples were over five percent lighter than the fresh fruit and treated samples.

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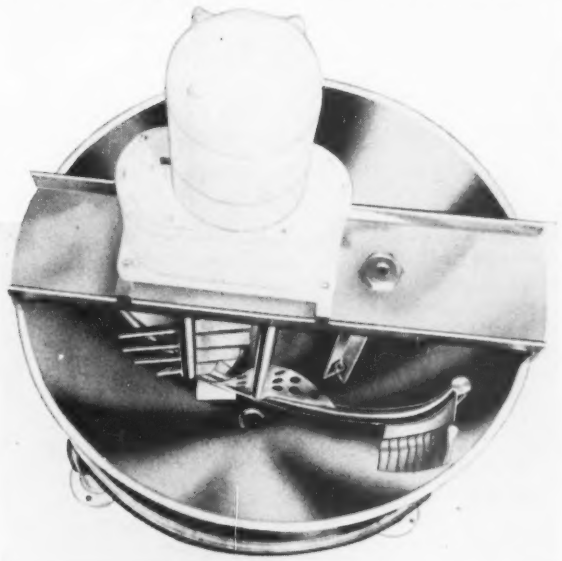

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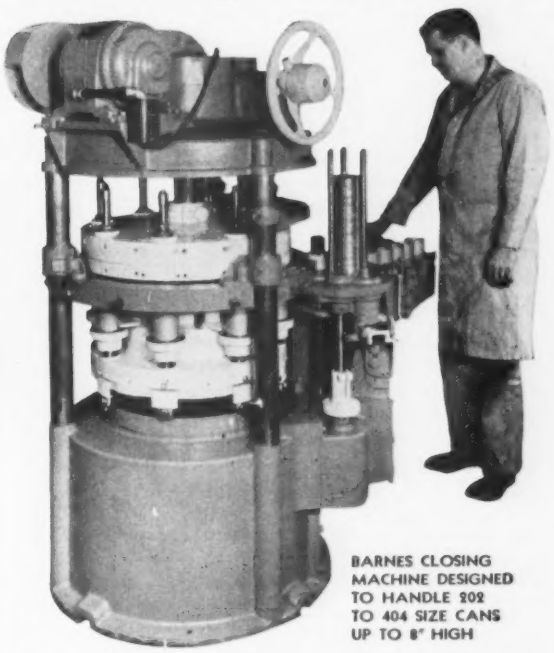

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FEATURES of this new machine include a single adjustment for obtaining uniform seams consistently, moderate spindle speeds which eliminate "bounce" over side seams, and insure positive sealing. In addition, the design of the end feed makes it possible to take a wider variation in end sizes.

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FREEZING

(Continued from page 37)

washer equipped with a revolving cylinder bristling with teeth. The mass of frozen limas is quickly broken up, and is carried by an attached bucket conveyor into a hopper from which storage cases are filled. As for blending of mixed vegetables, that is done in a cement mixer. "It's just like handling gravel," Voit explains.

To facilitate casing of consumer-sized cartons of frozen fruits and vegetables, a slowly revolving rack has been devised. Trays of cartons are placed, each in one swift motion, on its slanting sides, and packers do the casing by hand directly from the rack. Cases are sealed by a Pakomatic sealer.

Plant well equipped

One of Mario Ielmini's basic policies is to keep the plant well equipped and purchase new machinery whenever advantageous. An example of this is the automatic Diversey sanitation system in the plant. Another is the packaging line. The Marathon Marapak filler automatically sets up boxes, fills and closes them and sends them on ready for the wrappers—two continuous flow Battle Creek wrapping machines between them can handle 300 boxes a minute. It requires only five women—one on the filler and two on each packaging machine—to handle the entire operation.

Specially constructed metal racks, each with a capacity of 30 metal-framed, screen-bottomed trays, hold either bulk products or cartons (about 90 per cent of Patterson Frozen Food's output goes into 10 and 12 ounce cartons). The racks are moved by Yale worksavers. Filled with cartons from the wrapping machines, they are taken directly to one of the two freezing tunnels. On each side of center corridors are rows of compartments. Each holds four racks and is entered by a wide door which swings open overhead. With an air blast system, temperature is maintained at -20° to -30° F. Capacity of the two tunnels is three tons per hour.

Storage capacity at Patterson is around 75 carloads. There are four cold storage rooms with a corridor between each pair. The rear two are kept at a still temperature of 0° F. by a pipe coil system, and the front two are equipped with Recold blowers.

OPERATIONS ANALYSIS

(Continued from page 35)

were above the usually accepted danger point for the large firms of 75 percent of the tangible net worth. 1948 was the most recent year where the median value again was getting dangerously high. Since many fruit and vegetable canners are small concerns, the two-thirds or 67 percent point is the danger line that should probably be used for these concerns.

Inventory ratios

Because of the highly seasonal nature of fruit and vegetable canning, the common rules governing the relationship of inventories to tangible net worth and other values are probably not as valid as they are for many other industrial operations. However, I have included one chart (Chart No. 3) which shows the trend in the canned fruit and vegetable industry of the value of inventory as a percent of net working capital. Here again, the two-thirds and three-quarters rule is considered for most concerns to be the financial guidepost. This means that the inventory for the small companies ($50,000 to $250,000 tangible net worth) should not have a value greater than two-thirds of the net working capital, and for the larger companies not greater than three-fourths of the net working capital.

Sales ratios

The relationships of net sales to net working capital and to tangible net worth are considered to be two very important indicators of business stress and strain. The 20-year trend in the ratio of net sales to net working capital in the fruit and vegetable canning industry is shown in Chart No. 4. Actually the ratio of net sales to net working capital indicates the turnover rate of the net working capital. Increasing sales have been and probably always will be, in our free enterprise system the basic goal of every businessman. However, as every astute financial analyst and business executive knows, continued expansion of sales must be accompanied with the understanding that increased sales must be accompanied by a sufficient net working capital, adequate tangible net worth and collection periods that remain short enough to keep the business in healthy condition.

In this general approach to the subject of Operations Analysis, I hope that I have been able to arouse a degree of interest which will result in members of the canning industry becoming sufficiently interested in the application of the relatively simple techniques of graphic analysis and statistical evaluation to try them in their own operations. Those in the industry who have already gone through this stage and are presently groping with the new science "Operations Research" should closely watch the progress and development of this new and promising tool of management.

Assemble historical data

To the uninitiated I would recommend that they start with any phase of their operation and try to reduce the essential components to a little chart that might be kept up to date by using graph paper and a colored pencil. Or another possibility is to assemble historical data that are available concerning costs, sales, or any other measure that is deemed important and chart it against some other factor that is thought to be related and take a look at the trends and relationships shown. The important thing is to begin. You will then become familiar with the techniques and have a foundation upon which to build your new house of Operations Analysis.

Don't require or think it necessary to have a complete working knowledge of all of the techniques in this field before you start to use them. There may be available in your company a person who has not only the ability to bring together related facts and figures but to chart them in an understandable and useful form so that you will get a new perspective of some of the operating relationships in your business.

In the present period of keen competition and the days ahead when technological advances will make competition still keener, and when the inefficient and the unprogressive will fall by the wayside, I am sure that you will find that consistent use of the facts that you can get from the analysis of your operations in quantitative terms will result in uniformly more accurate decisions.

Every successful business is based on consistently sound decisions and the anticipation of situations which arise in the future. The simplified techniques of Operations Analysis that I have described here will provide every canner with a sound basis for his decisions and for accurately anticipating the nature and timing of factors that will vitally affect his business.

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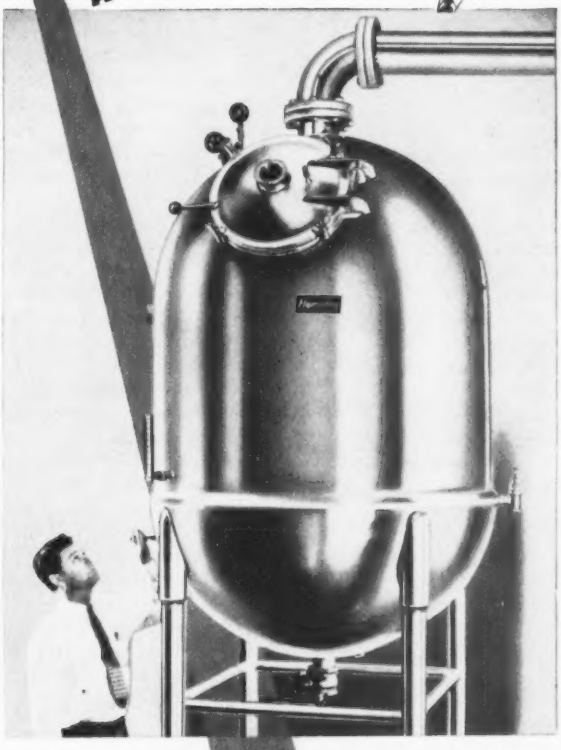

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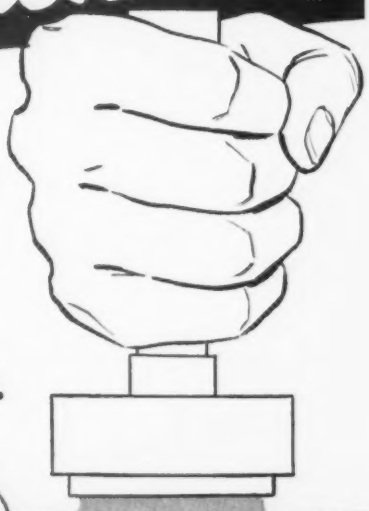

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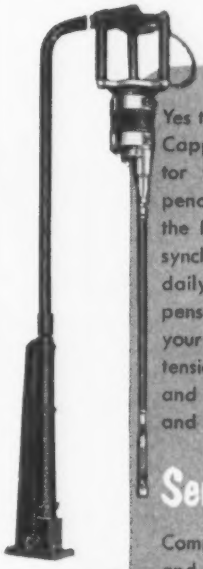

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GOULD

(Continued from page 44)

quality. In certain seasons and with certain varieties of tomatoes, it may be a very satisfactory procedure.

On the other hand, there are those who believe that the external surface color of a tomato is greatly affected by the amount of sunlight the tomato is exposed to, and by the temperature range during the last few days of ripening. The grower picks his fruit by looking at the external color of the tomato, but in my opinion there is absolutely no reason why he couldn't cut a few tomatoes in the field each day to keep his sights set. Thus, he would be picking the fruits that contain the maximum internal color. This whole problem is very important to the tomato juice, pulp, catsup, or soup manufacturer since he wants to know how red the tomato is all the way through and not just the external color of the fruit.

Cut surface method

The cut surface method of grading tomatoes has been used in California for over 10 years. In the Midwest, the inspectors occasionally cut tomatoes to keep their sights set, but at the present time cutting the majority of the fruits is not generally done. The cut surface method seems to offer great possibilities in contrast to the external surface method.

The technique of making a puree from the raw product sample and then measuring the color of this puree, of course, is ideal for certain products. However, some groups have voiced certain objections to this method. The most serious objections are: (1) the method is too time consuming; and (2) a possible change in the color of the raw sample may take place due to different techniques and equipment being used to extract the juice or pulp from the sample. Actually, I don't believe either of these points is too objectionable if the sample is prepared by a competent quality control technologist. Personally, I think the real objection is that the grower has often watched the grader determine the color of the product right on the spot, thus he sees exactly what the inspector sees. Because of this, it may take some time to convert the grower to the value of some of the newer approaches to color measurement.

The extraction of the pigment or pigments and the determination of the quantity of the pigment or pigments present is the fundamental research approach to these color problems. However, the method is too time consuming and too technical for the routine quality grading of raw and processed fruit and vegetable products.

The instruments in use for determining the color of fruits and vegetables are increasing in number and design. At the present time, no one instrument has been adopted universally as the standard instrument. This is probably as it should be until more of the many details are adequately worked out. It should be emphasized that in the development of any instrument, considerable time and money are required to develop the instrument and to adapt it to the many practical problems of grading.

The instruments being considered for use in the grading of different fruits and vegetables, particularly for tomatoes, are: (1) The Hunter Color and Color Difference Meter (Fig. 1); (2) the Magnuson Engineers' Agtron (Fig. 2); (3) the Purdue Color Ratio Meter; and (4) the Beckman Spectrophotometer (Fig. 3). Other instruments have been used and have been considered by some groups, such as the Photovolt Reflection Meter and the Lumetron. In addition to the above, the use of matching the tomato sample to Munsell papers under controlled lighting conditions (Fig. 4) and the use of painted models, colored dye solutions, and standardized plates have been proposed. The selected list of references at the end of this article should give the reader further information on any one of the above instruments and their use for color evaluation of food products.

USDA project

No doubt other instruments and techniques will be proposed in the immediate future and possibly they will be adopted for official use. However, at the present time it should be pointed out that the U. S. Department of Agriculture has a cooperative project with several state experiment stations and a sub-project within the Department on the use of color instruments for the objective evaluation of color in food products. Results of these findings probably will specify the use of color instruments for the objective measurement of color evaluations and possibly grade specifications of fruits and vegetables.

The use of instruments to measure color and small color differences in raw and processed fruits and vegetables is a relatively new approach to the overall color problem. Many of the fresh and processed fruit and vegetable standards have a factor of color as one of the attributes of the standard with specific score points allotted for each of the different grades. Most of the standards specify the color requirements in terms of word descriptions. The exact requirement can be determined only by a thorough knowledge of the meaning of the word description.

Thus, the first problem confronting the users of color measuring instruments is to know how to interpret the color reading obtained from any specific instrument in terms of the grade standard. This problem could be quite easily solved if the word descriptions used in the existing grades and standards were defined in terms of some one of the recognized color systems. Most of the instrument manufacturers are attempting to construct their instruments so that the color readings obtained can be easily converted to one of the specific recognized color systems.

In conclusion, I have seen several of the above color instruments in actual use and have worked with some of these instruments during the past four seasons. I believe that the time is approaching when one or more of the instruments will be adopted for official grading purposes. Actually if each instrument is so constructed and so calibrated any one of them could be used, since it would be possible to convert the data obtained from any one particular instrument to another or to a particular grade. Whether or not an instrument is adopted for official grading of our raw and processed products and for quality control within the plant in the immediate future, we must remember that this field of objectively evaluating the quality of a product (color in this particular case) is a relatively new approach to the overall quality control program. Great strides have been made in the past few years and it is likely that greater strides will be made in the next year or two.

If all groups including the grower, the processor, the consumer, the quality control technologist, the instrument manufacturer, and the Government grading and regulatory officials pull together, we can arrive at one common denominator that will be satisfactory to all concerned. Only by concerted efforts of all groups can this be obtained. In the meantime, the development of more instruments is to be encouraged and it is hoped that each manufacturer will so construct and so calibrate his particular instrument so that the user, whether he be grower, processor, quality control technologist, or Government grader, can use the instrument and interpret the reading obtained from the instrument in

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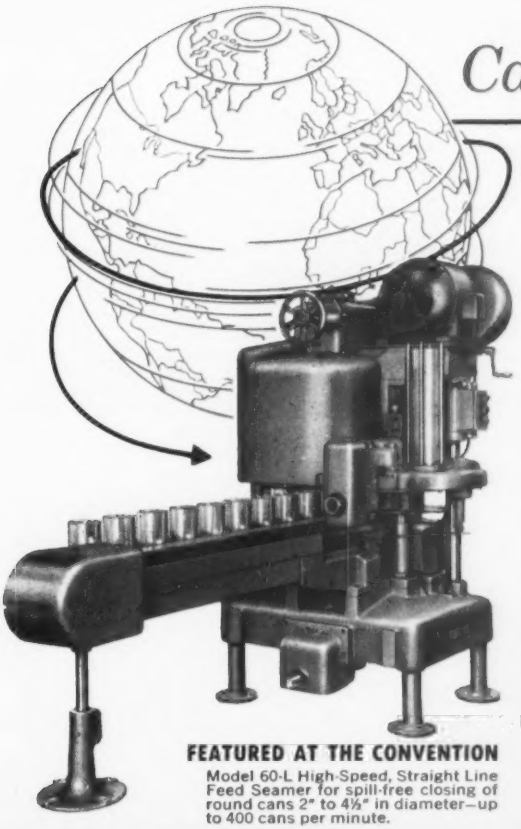

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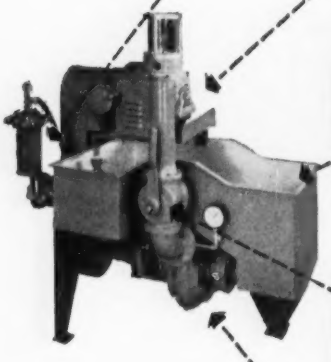

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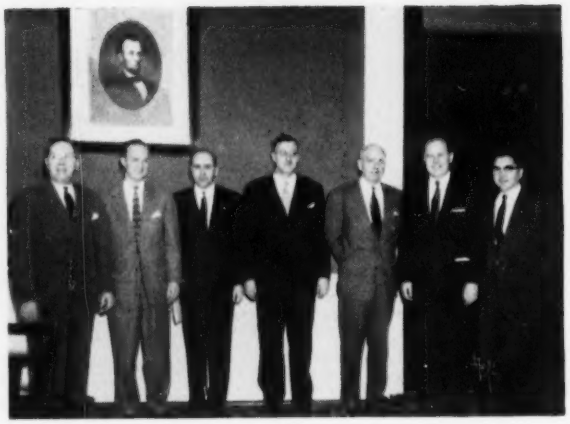
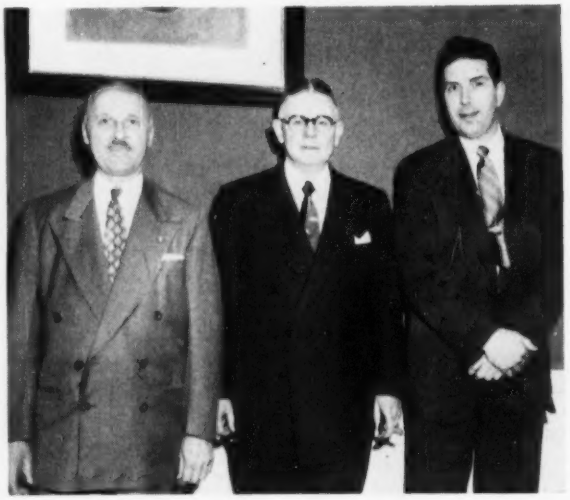


State canning association presidents who spoke at Brokers luncheon.



The officers of the Chicago Food Brokers Association.

Chicago Food Brokers Association celebrates its 25th anniversary at luncheon in Chicago

The Chicago Food Brokers Association celebrated its 25th anniversary at a monthly luncheon held at the Germania Club in Chicago on January 19. About 100 people attended.

Honored guests who spoke at the luncheon were presidents of seven state canning associations. They reviewed the canning programs in their respective states, giving pertinent statistics on most important products packed, climatic conditions, and soil.

Shown above in the top picture are the seven presidents, left to right: G. A. Turmail, Indiana Canners Association; Ray Krier, Wisconsin Canners Association; Robert Cosgrove, Minnesota Canners Association; W. W. Wilson; New York State Canners and Freezers Association; P. A. Schmith, Illinois Canners Association; A. E. Brown, Michigan Canners Association; and Thomas Timmer, Ohio Canners Association.

Shown above in the lower picture are the officers of the Chicago Food Brokers Association. They are, left to right: W. W. Wurm, president; H. J. McDonald, vice-president; and C. B. Sturgeon, secretary-treasurer.

(Continued from page 96)

simple layman's terms of the color language.

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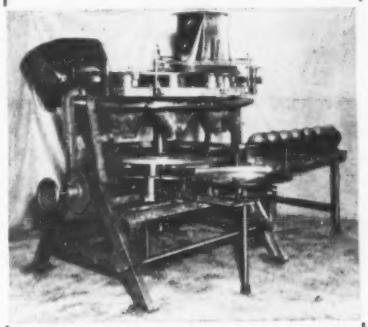

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American Cancer Society

Allen C. Staley, Jr.

Robert C. Stolk

Canco announces promotions in sales department

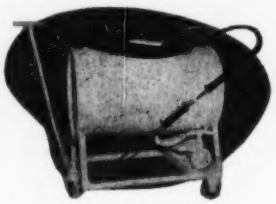
Allen C. Staley, Jr., of San Francisco, manager of sales for the Pacific division of American Can Co., was named assistant general manager of sales for the company. Robert C. Stolk, now assistant manager of sales for the Pacific division, will succeed Staley as manager of sales.

In his new job Staley will assist in the direct supervision of all Canco sales activities in the United States and Canada. Stolk will direct sales activities on the West Coast, Hawaii and Alaska.

Staley, a native of Tippecanoe City, Ohio, first joined Canco's sales department in 1937. Stolk, a native of Cranford, N. J., started working for Canco in 1933.

Standard-Knapp appoints Allen general manager

Robert N. Allen was appointed general manager of Standard-Knapp, division of Emhart Mfg. Co., Portland, Conn. He succeeds George Ingham who retired December 31. Simultaneously it was announced that Ingham and Malcolm McFaull, vice-president of Emhart and district sales manager in New York who also retired December 31, will be retained as active consultants.



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Robert S. Solinsky

National Can elects president

Robert S. Solinsky was elected president and a director of National Can Corp., New York. He succeeds C. L. Thompson who will continue as chairman of the board. Solinsky is a former president of the Can Manufacturers Institute and is currently a member of the Institute's board and executive committee.

Ball Brothers representatives

The commercial container division of Ball Brothers Co., Muncie, Ind., will be represented at the NCA convention by John W. Fisher, vice president and director of sales; Kenneth M. Hay, sales manager; E. E. Ester, field sales manager; G. Fred Rieman, vice president; Charles R. Warren; and Fred H. Dellwo. The Aridor Co., closure division of Ball Brothers, will be represented by Van Smith, general manager, and B. H. Clark, sales manager.

How they got there

Louis Ratzesberger Jr.

Holds NCA gavel in '53

When Louis Ratzesberger Jr. of the Illinois Canning Company is handed the president's gavel at the National Canners Association convention this month in Chicago, the NCA and the canning industry will honor a man whose basic philosophy as a canner is simply this: "If we do our job right, operate as efficiently as possible, and hold our ideals and principles high, we can expect our share of the nation's canning business, and maybe a little more."

Lou Ratzesberger is a young man—in his middle forties. Nevertheless, he has packed enough of this hard-hitting business philosophy, plus a generous amount of drive and enthusiasm, into his years to become president of one of the country's outstanding canning factories and a leading figure in the industry. In his quiet and affable way, he has studied and learned the principles of association with people both in and out of his industry. These qualities have helped make him a successful man, and the same qualities now admirably equip him for the rigorous year he faces as president of the National Canners Association.

Lou was born the son of a jeweler and spent a happy boyhood in the small midwestern town of Milford, Illinois, just a few miles from Hoopeston, his present home. As a youngster he watched with interest the summer activities at the Milford Canning Co., then owned by L. H. Risser.

He acquired a love for the soil by working on his aunt's farm during school vacations. Later when he attended the University of Illinois, he spent his summers working at the canning factory. His first job was operating a corn cutter, but it wasn't long until he was placed in charge of the syrup room. Here he pinned on himself the identifying hallmark of any canner, i.e., the ability to sleep standing up.

By the time Lou was graduated, with honors, from the University of Illinois with a degree in accounting, he was acquainted with the Albert T. Bacon Co. of Chicago, a firm that had audited the books of the Milford cannery for several years. Mr. Bacon offered Lou a job, and he accepted. A year or so later, an official from the Illinois Canning Co. offered him a job as assistant treasurer of the company. On June 18, 1928, Lou moved to Hoopeston and started to work. By doing so, he helped fulfill the prophecy set forth by one of his accounting instructors, who predicted to the class that within five years a majority of his students would not be accountants.

Lou advanced rapidly with the Hoopeston company, first to treasurer, then to secretary-treasurer. In 1936 he was appointed executive vice-president. In 1944 he was made president.

He and his associates believe that it's good business to maintain a pleasant and harmonious relationship with employees, and this creed is followed religiously by the Illinois Canning Co. It not only promotes efficiency in operation, but also encourages year-around workers to stay with the organization. At yearly gatherings, workers are informed of the progress of business as well as problems that exist. Part of the profits is shared among the permanent force.

Lou is a believer in diversification, and for some years the plant has packed dry beans during the winter months in addition to vegetables in season. These beans, packed under the famous Joan of Arc label, now form a substantial part of the company's operations. This off-season product provides year-round employment for more people and helps solve the overhead problem that is present whether or not the plant is operating.

Lou believes that work-simplification is a leading key to efficiency and high morale on the part of workers. The company's system of materials handling is outstanding, and innovations are constantly being made in plant installations for the easier transporting of raw products, supplies, and canned goods. Lou Ratzesberger's office door is always open to any of his people, but more often you see him out in the plant, critically studying some operation with the view toward improving it. The majority of plant employees call him by his first name.

In 1928 he married Marian Vandervort from the neighboring town of Kankakee. Last September he made a hurried trip to Tucson, Arizona, where his oldest daughter, Lelia, the wife of an army officer, presented him with his first grandchildren—triplets! Louis Todd, a son, is now attending the University of Illinois, and Marise, the younger daughter, is a sophomore at the same institution.

Generous with his time

Lou always has been generous with his time and energies in behalf of the canning industry. He served a term as director of the Illinois Canners Association and later as president. He also has been a director of the National Canners Association. At the present time, he is a member of the agricultural industry relations committee of the Illinois State Chamber of Commerce.

As a firm believer in sound government, whether at the national, state, county, or local level, Lou has never hesitated to participate in civic accomplishment at home. He is now a director of the Hoopeston bank; president of Hoopeston Homes Association, a group that promoted and now operates a 30-unit apartment building under the Illinois State Housing Board; he has served on the local school board for nine years and is currently a county trustee; he is a leader in fund soliciting drives for the Red Cross and the USO; and he is vice-president of the six-county Piankeshaw Council of Boy Scouts.

As a skilled and well-trained administrator, one who knows the canning industry and all its ramifications, and who is acquainted with the many activities of the National Canners Association, Louis Ratzesberger will bring further credit to the Association and the industry in the coming year.

He had a modest answer when asked "How he got there"—"Lots of luck, I guess," he said. We at FOOD PACKER are reminded of the famous and anonymous saying, "The best luck comes to him who works the hardest."

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